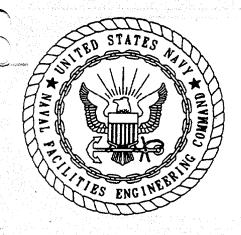




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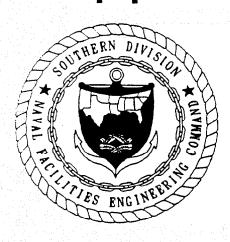
BASE REALIGNMENT AND CLOSURE ENVIRONMENTAL SITE SCREENING REPORT

STUDY AREA 17

NAVAL TRAINING CENTER ORLANDO, FLORIDA

UNIT IDENTIFICATION CODE: N65928 CONTRACT NO.: N62467-89-D-0317/107

MARCH 1999



SOUTHERN DIVISION NAVAL FACILITIES ENGINEERING COMMAND NORTH CHARLESTON, SOUTH CAROLINA 29418



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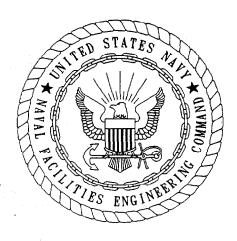
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March 1999



CERTIFICATION OF TECHNICAL DATA CONFORMITY (MAY 1987)

The Contractor, Harding Lawson Associates, hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/107 are complete and accurate and comply with all requirements of this contract.

DATE	March 2	1000	
DAIR.	march /	1999	

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(DFAR 252.227-7036)

EXECUTIVE SUMMARY

Harding Lawson Associates (HLA), under contract to the Southern Division, Naval Facilities Engineering Command, has prepared this Site Screening Report for Study Area (SA) 17, located at the Naval Training Center in Orlando, Orange County, Florida. This report was prepared under the Comprehensive Long-term Environmental Action, Navy Contract No. N62467-89-D-0317 as Contract Task Order No. 107.

The objective of the site screening investigation was to locate and identify any compounds that may be present at concentrations exceeding screening criteria. The investigation required several phases to complete. During the initial episode of screening, the surface soils at the site were found to have concentrations of polynuclear aromatic hydrocarbons (PAHs) exceeding screening criteria. The investigation also demonstrated that the groundwater of the surficial aquifer had concentrations of chlorinated volatile organic compounds (VOCs) exceeding screening criteria. Accordingly, the Orlando Partnering Team requested supplemental screening investigations designed to (1) evaluate and characterize the PAHs in soil, and (2) evaluate and characterize the chlorinated VOCs in groundwater.

The field program to evaluate PAHs in soil involved the collection of surface soil samples from a grid placed around the original soil sampling location(s). The samples were analyzed on site using immunoassay testing techniques to determine the total PAH concentration. After the general contamination limits had been defined, confirmation samples were collected for off-site laboratory analysis. The results of the investigation permitted better definition of the limits of contamination and the specific PAH compounds present.

The supplemental groundwater evaluation involved two phases of fieldwork. The first phase involved the installation and sampling of monitoring wells in the immediate vicinity of the well where VOC exceedances were discovered. This work was implemented to determine whether the contamination was confined to the immediate area of the original well. The second phase was designed to delineate the plume and to evaluate the factors affecting plume migration. This was accomplished through the collection of groundwater screening samples throughout the surficial aquifer. The samples were collected using direct-push technology (DPT) and analyzed with an on-site field laboratory. Some of these samples were submitted to an off-site laboratory for confirmation. Permanent monitoring wells were installed and sampled to confirm the nature and extent of the plume. Surface water and sediment samples were also collected from the drainage canal on the south side of the site to determine whether the plume had migrated to that area. The migration assessment involved a lithologic characterization, hydraulic conductivity testing, and groundwater flow measurements.

The results of the groundwater evaluation suggest that the plume originated from at least two source areas located in the north-central part of the former motor pool compound. The plume extends east-southeast from the source areas in the direction of groundwater flow to a distance of approximately 250 feet downgradient. The highest VOC concentrations were detected at the source areas along the upper surface of a thin layer of less permeable sand and silt at a depth of 15 to 25 feet below land surface (bls). This layer and another somewhat deeper layer of silty sand act as aquitards that divide the surficial aquifer into three units — shallow, intermediate, and deep. The upper surface of these layers, as

NTC-ESSR.S17 SAS.03.99 well as the shallowest clay within the Hawthorn Group sediments at the base of the surficial aquifer, act as accumulation points for the contaminants.

Analytical results of groundwater samples collected from permanent monitoring wells confirmed the results of the DPT groundwater screening program. The highest total chlorinated VOC concentration was 65,000 micrograms per liter $(\mu g/\ell)$ in well OLD-17-24B, screened at 20 to 25 feet bls. Vertical migration of contaminants to the base of the surficial aquifer was confirmed with detections in samples collected at monitoring wells OLD-17-10C, OLD-17-20C, and OLD-17-22C. There were also detections in samples collected from monitoring wells OLD-17-25C and OLD-17-28C, which were screened below the clay that separates the surficial aquifer from the underlying Hawthorn Group. Chlorinated VOCs were detected in the surface water and sediment samples collected in the drainage canal along the southern boundary of SA 17.

HLA recommends that all of the surface and subsurface soil where PAH concentrations exceed screening criteria be excavated and removed for disposal off site. Because the intended reuse for this site is industrial, HLA recommends that industrial screening criteria be used to determine the volume of soil that is remediated. For the chlorinated VOC plume in groundwater, HLA recommends that a natural attenuation (NA) assessment be performed to evaluate whether or not NA is a viable remedial alternative. HLA also recommends that a Preliminary Risk Evaluation (PRE) be performed to determine the risk of exposure to contaminants in the drainage canal. The results of the NA assessment and the PRE should be used to determine the need for a Focused Feasibility Study.

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GLOSSARY

ABB-ES AST	ABB Environmental Services, Inc. aboveground storage tank
bls BTEX	below land surface benzene, toluene, ethylbenzene, and xylene
CLP CPT	Contract Laboratory Program cone penetrometer testing
DCE DPDO DPT DQO	dichloroethene Defense Property Disposal Office direct-push technology data quality objective
FDEP FID FFS ft/day ft/ft ft/min ft/yr	Florida Department of Environmental Protection flame ionization detector focused feasibility study feet per day feet per foot feet per minute feet per year
GC GCTL GPR	gas chromatograph groundwater cleanup target level (Florida) ground-penetrating radar
HLA HSA	Harding Lawson Associates hollow-stem auger
IA IAS IRA	immunoassay initial assessment study interim remedial action
MCL μg/l μg/kg mg/kg	maximum contaminant level micrograms per liter micrograms per kilogram milligrams per kilogram
NA NTC	natural attenuation Naval Training Center
OPT	Orlando Partnering Team
PAH ppm PRE PVC	polynuclear aromatic hydrocarbon parts per million preliminary risk evaluation polyvinyl chloride
RBC RME	risk-based concentration reasonable maximum exposure

GLOSSARY (Continued)

SA	Study Area
SCM	site conceptual model
SCTL	soil cleanup target level
SPT	standard penetration testing
TAL	target analyte list
TC	terrain conductivity
TCE	trichloroethene
TCL	target compound list
TRPH	total recoverable petroleum hydrocarbons
USCS	Unified Soil Classification System
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound

1.0 STUDY AREA 17, DEFENSE PROPERTY DISPOSAL OFFICE, TRAINING MATERIALS STORAGE BUILDING (BUILDING 7178), MAINTENANCE OFFICE BUILDING (BUILDING 7190), INERT STORAGE WAREHOUSE BUILDING (BUILDING 7191), AND GENERAL WAREHOUSE BUILDING (BUILDING 7193)

1.1 INTRODUCTION AND OBJECTIVES. This report contains information regarding the environmental site screening activities at Study Area (SA) 17 located at the Naval Training Center (NTC) in Orlando, Orange County, Florida. The objectives of the screening activities were to identify and evaluate areas where environmental media may have been adversely affected by past site activities. Activities were focused on areas where current and/or historical land use may have posed a threat to the environment.

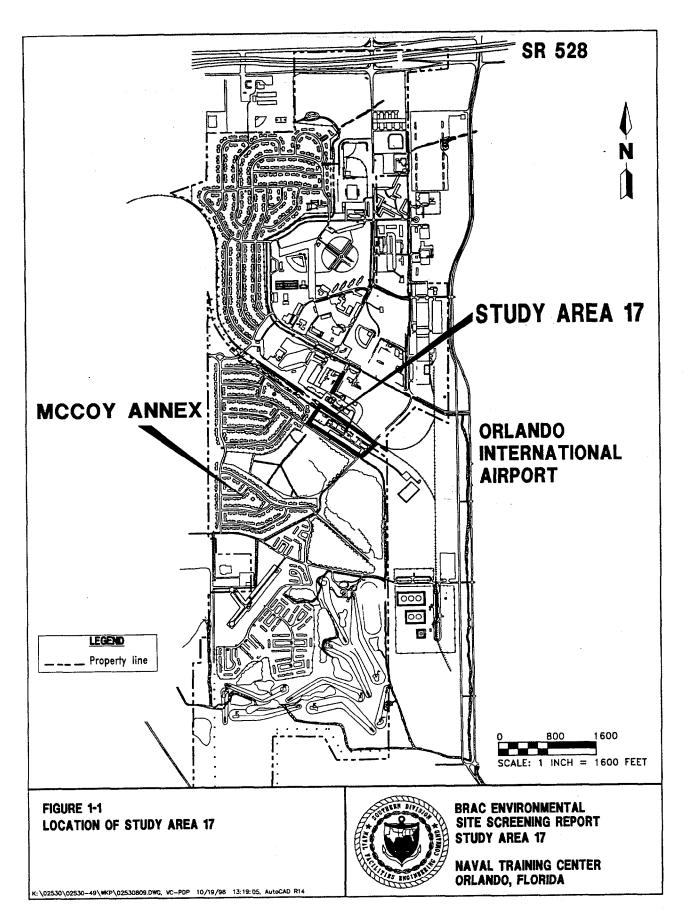
The initial site screening investigation was performed in 1995, and the results were reported in the Site Screening Report, Group III, Naval Training Center, Orlando, Florida (ABB Environmental Services, Inc. [ABB-ES], 1995a). Findings from the initial investigation indicated that there were exceedances of screening criteria for polynuclear aromatic hydrocarbons (PAHs) in soil and chlorinated volatile organic compounds (VOCs) in groundwater. Subsequently, the Orlando Partnering Team (OPT) requested that Harding Lawson Associates (HLA) perform supplemental investigations to evaluate the nature and extent of soil and groundwater contamination. The supplemental screening activities were performed during the period from January 1997 to August 1998.

This report is divided into five chapters. Chapter 1.0 provides the background and description of SA 17; Chapter 2.0 presents the activities and results of the initial screening investigation; Chapter 3.0 presents the activities and results of the PAH evaluation in surface soil; Chapter 4.0 presents the activities and results of the groundwater evaluation; and Chapter 5.0 presents the conclusions and recommendations.

1.2 BACKGROUND AND SITE CONDITIONS. SA 17 occupies approximately 25 acres in the central part of the McCoy Annex (Figure 1-1). The site includes Buildings 7178, 7191, 7193, and the adjacent area that formerly served as the Defense Property Disposal Office (DPDO) complex for the McCoy Annex (Figure 1-2). The site also includes Building 7190, the former Administration and Warehouse Building. The southwestern corner of the site is undeveloped. A shallow canal that drains to the east extends along the entire southern boundary of the site.

The following paragraphs provide a summary of the potential sources of contamination of the specific hazards associated with each area of the site. Potential sources may have been released due to spills or leaks associated with underground storage tanks (USTs), aboveground storage tanks (ASTs), or drum storage areas.

<u>Building 7178</u>. Constructed in 1965 as the Training Materials Storage Building, the 3,300-square-foot structure was most recently used for furniture and carpet storage. It has concrete block walls on a slab foundation. The asphalt pavement around the building is badly deteriorated and completely surrounded by a fence.



A shed has been added to the northwest wall of the building and was apparently used for the storage of drums and flammable and/or hazardous material. A 110-gallon AST used for the storage of heating oil was removed from Building 7178 in 1994 (ABB-ES, 1994).

<u>Building 7190</u>. Building 7190 was constructed in 1952 as an administrative building housing an Army Maintenance Office. The 3,000-square-foot building is a cinderblock structure which currently supports light automotive maintenance. The building contained a 550-gallon UST that was used for heating oil and was removed from the building in March 1993.

Associated with Building 7190 is a fenced compound which formerly served as the former motor pool area. The compound is unpaved and covered by gravel. The compound was most recently used by the lawn maintenance contractor for equipment storage and maintenance. During the Environmental Baseline Survey, several 55-gallon drums of waste fuel, oil, and ethylene glycol were observed on wooden pallets along the northern fenceline of the compound (ABB-ES, 1994). Hazardous materials (paints, oils, anti-freeze) were also reportedly stored here. These have since been removed. A vehicle wash rack is located just outside the north fence line of the storage area. The wash rack reportedly is connected to a leachfield located south of the wash rack inside the fenced storage yard (Fuller, 1998).

<u>Building 7191</u>. Building 7191 was constructed in 1955 and was most recently used for furniture storage. The 3,072-square-foot building is constructed of concrete block walls on a slab foundation. A 110-gallon UST (heating oil) was removed at some point in the past. The fenced, gravel lot between Buildings 7178 and 7191 was also used by the base lawn maintenance contractor to store equipment.

Building 7193. Building 7193, a 3,320-square-foot building constructed in 1959, is currently used for general storage and has a concrete slab floor with metal frame walls. The building is surrounded by a fenced, paved lot on three sides. According to earlier investigations (Initial Assessment Study [IAS], C.C. Johnson, 1985), a 110-gallon UST and a 250-gallon AST were located within the DPDO area. Electrical transformers and 55-gallon drums (contents unknown) may have been stored in this area (C.C. Johnson, 1985). The report also suggests that there had been releases due to leaking from 55-gallon drums.

The open area located to the immediate south of Building 7193 was designated IAS-6. The verification study was performed there in 1986 (Geraghty & Miller, 1986). Drums have been stored in this area as recently as March 1994.

2.0 INITIAL SITE SCREENING INVESTIGATION

The workplan for initial site screening was presented in the Site Screening Plan, Groups I through V Study Areas and Miscellaneous Additional Sites, Naval Training Center, Orlando, Florida (ABB-ES, 1995b). The fieldwork for the initial phase of screening was performed during the period from February through May 1995, and was reported in the (draft) Site Screening Report, Group III (ABB-ES, 1995a). The field activities for the initial site screening investigation are summarized below.

- $\underline{2.1}$ FIELD PROGRAM. The initial site screening field program consisted of the following activities:
 - · geophysical surveys,
 - · passive soil gas surveys in selected areas,
 - soil sampling,
 - · sediment and surface water sampling, and
 - · monitoring well installation and groundwater sampling.

All activities performed during the investigation were conducted in a manner consistent with HLA's Project Operations Plan (ABB-ES, 1997a) developed specifically for work at NTC, Orlando.

2.1.1 Geophysics A geophysical survey was completed to locate buried objects that could pose a threat to the environment (e.g., buried drums, USTs). The survey involved the use of a magnetometer and time domain metal detector to locate metallic objects. Specific parameters measured were the vertical magnetic gradient and bulk terrain conductivity (TC) values. In addition, ground-penetrating radar (GPR) surveys were completed around the perimeters of buildings to identify potential USTs and to further characterize any magnetic and/or TC anomalies.

Prior to performing the survey, a grid coordinate system was established across the entire area to determine the relative location of any target anomalies to be cleared during the subsequent GPR survey. Following the survey, the grid coordinates at the location of each anomaly were noted, and the outline of the anomaly was marked on the ground surface by paint and/or pin flags for future reference.

2.1.2 Passive Soil Gas Survey A passive soil gas survey was performed to locate areas where VOCs or semivolatile organic compounds were present in the subsurface. Passive soil gas detections would help to focus subsequent soil and groundwater sampling efforts.

Passive soil gas samplers were installed at approximately 60 locations at SA 17, in the area between buildings 7191, 7178, 7190, and 7189 on the north and the drainage canal on the south. Samplers were installed in a grid with 50 feet of spacing between locations. Each sampler was equipped with two activated charcoal adsorption elements housed in a glass tube. The glass tube was placed upside down in a narrow borehole (approximately 1-1/2 inches in diameter) to a depth of 1 foot below land surface (bls). Following installation, the detectors were covered with a thin layer of soil or, in paved areas, with a thin layer of

cement. Several time-calibration samplers were installed at locations within the survey area to measure the rate at which "loading" by volatile gases was occurring. These samplers were retrieved after 2 days and analyzed to determine the optimal period of time the other samplers should remain in place. The time-calibration results indicated that the samplers should remain deployed for a period of 7 days before retrieval.

During analysis, one of the charcoal elements was analyzed by thermal desorption and mass spectrometry to measure the ion count of substances detected. If compounds were detected, the second element was analyzed by thermal desorption and gas chromatography/mass spectrometry to identify the compound(s) causing the response.

Soil gas data are always semiqualitative, as multiple sources in soil and/or groundwater cannot be differentiated. Further, compound concentrations in each collector are compared on a relative basis, depending on whether or not the data are interpreted to be of high, moderate to high, moderate, etc., intensity. These qualitative soil gas values do not represent actual concentrations of the reported compounds. Efforts to relate soil gas response directly to groundwater or soil contaminant concentrations are generally not regarded as productive due to the assumptions that are required for heterogeneity and source distribution.

All sampling and analysis were performed in accordance with U.S. Environmental Protection Agency (USEPA) Level II data quality objectives (DQOs) (USEPA, 1993).

- 2.1.3 Soil Sampling Surface soil (collected from 0 to 2 foot bls) and/or subsurface soil (greater than 2 feet bls) samples were collected from 32 soil borings during initial screening. All soil samples were collected with a stainless-steel hand auger. Each soil boring was screened for the presence of organic vapors using a flame ionization detector (FID). A summary of the sampling locations is provided below. Unless otherwise noted, no FID deflections were noted during sampling.
- 2.1.3.1 Surface Soil Sampling One surface soil sample (17B00801) was collected from the centerline of a drainage swale south of Building 7190 to evaluate potential contamination associated with general site activities in the area surrounding the facility. Sample 17B01801 was collected from a hand-augered soil boring located near the northeast corner of the Building 7191. Sample 17B01901 was collected approximately 35 feet east of the northeast corner of Building 7191. This location is adjacent to the 500-gallon gasoline and diesel fuel AST on the site. A surface soil sample was collected at 6 to 18 inches bls. FID deflections of 2000 parts per million (ppm) and 10 ppm, respectively, were recorded when sampling these intervals.

Three surface samples were collected from the IAS-6 area. The samples were designated 17B02301, 17B02401, and 17B02501. No FID deflections were noted while collecting these samples.

Three surface soil samples (17803401, 17803501, and 17803601) were also collected at runoff points between the south perimeter fence of the former motor pool complex and the drainage ditch. No FID deflections were noted while collecting these samples.

2.1.3.2 Subsurface Soil Sampling One subsurface soil sample (17B00701) was collected from a boring adjacent to a capped 2-inch-diameter steel pipe protruding from an area of disturbed soil 10 feet from the northwest wall of Building 7190.

Four subsurface soil samples were collected at Building 7178. Sample 17B00901 was collected from a boring adjacent to fuel pipes protruding from the northwest corner of the building. Sample 17B01001 was collected from a boring near the shed on the west side of the building. This shed was reported to have been a storage area for flammable materials. Sample 17B01101 was collected from a boring adjacent to a fuel pipe protruding from the wall near the northeast corner of the building. The fourth sample (17B00201) was collected from a soil boring advanced on the south side of Building 7178. All four samples were collected from the interval overlying the groundwater table, which varied from approximately 4 to 6 feet bls in this area at the time of the investigation.

One subsurface soil sample (17B01802) was collected from a boring placed near the northeast corner of Building 7191. The subsurface soil sample was collected from the interval overlying the groundwater table.

Three subsurface soil samples (17B02001, 17B02101, 17B02201) were collected from borings located south and west of Building 7193. Sample location 17B020 was sited adjacent to a 4-foot-by-10-foot area of replaced asphalt pavement, southwest of Building 7193. The second sample location (17B021) was sited in the vicinity of drum ring impressions formed in cracked asphalt pavement adjacent to the south side of Building 7193. The third sample (17B022) was sited in the grassy area between Buildings 7193 and 7191.

Three subsurface soil samples (17B02302, 17B02402, and 17B02502) were collected from IAS-6. All three samples were collected within the interval of 3 to 4 feet bls.

Six subsurface soil samples (17B01201 through 17B01701) were collected from the former motor pool area. Samples were collected from the interval overlying the groundwater table, at 3 to 4 feet bls.

Subsurface soil samples were also collected at each permanent and temporary well location (locations 17B001 through 17B005) (see Subsection 2.1.4). The samples were collected from the depth interval immediately overlying the groundwater table.

2.1.4 Monitoring Wells Installation and Groundwater Sampling Five shallow permanent monitoring wells were installed during the investigation. Monitoring well OLD-17-01A was installed approximately 20 feet south of the former AST location. Well OLD-17-02A was installed approximately 20 feet south of Building 7178. Monitoring wells OLD-17-03A and OLD-17-04A were installed inside the former motor pool compound, and OLD-17-05A was installed in the southeast corner of IAS-6, presumably downgradient of a geophysical anomaly. A temporary groundwater monitoring well (OLD-17-24T) was also installed at a location presumed to be downgradient of a second geophysical anomaly.

All of the permanent wells installed during the investigation were constructed with 2-inch-diameter polyvinyl chloride (PVC) riser and 0.010-inch slotted screen. The annulus between the walls of the soil boring and the well screen was

filled with a 20/30 silica sand filter pack. The filter pack was sealed with a layer of bentonite, and the remainder of the annulus was filled with grout. The well was completed at the surface with a concrete pad, bolt-down vault, and locking cap. Following development and a period of stabilization, groundwater samples were collected from the new wells.

All of the field data sheets associated with monitoring well installation and sampling during the investigation, including the soil boring logs, well construction diagrams, the development and sampling data sheets, are provided in Appendix A.

2.1.5 Surface Water and Sediment Sampling Four surface water and sediment sample pairs were collected from the drainage ditch along the southwest and northwest perimeter of SA 17. One sample pair (17W026 and 17D026) was located upgradient of the site. The second sample pair (17W027 and 17D027) was collected downgradient of a geophysical anomaly identified in the south-central area of The third sample pair (17W028 and 17D028) was IAS-6 (C.C. Johnson, 1985). The fourth pair collected downgradient of the 5th Street vehicle wash rack. (17W029 and 17D029) was collected adjacent to the culvert at the intersection of Ammons Avenue and Avenue "C." Surface water was approximately 4 inches deep at location 17D026, 12 inches deep at location 17B027, 18 inches deep at location number 17B028, and 30 inches deep at location number 17D029. FID deflections were noted at locations 17D027 (25 ppm) and 17D028 (10 ppm) during sample collection.

Dense aquatic plants were at the water surface at each sample location. Sediment consisted of approximately 2 inches of dark brown to black organic muck, overlying silty fine sand.

All media samples collected during initial screening were submitted for total recoverable petroleum hydrocarbons (TRPH) and full suite Contract Laboratory Program (CLP) target compound list (TCL) and target analyte list (TAL) analyses in accordance with USEPA Level IV DQOs. In addition, all groundwater samples were analyzed for total suspended solids, sediment samples were analyzed for total organic carbon, and all surface water samples were submitted for TRPH and alkalinity analyses in addition to full suite CLP TCL and TAL analyses.

2.2 RESULTS. The results of the initial site screening investigation at SA 17 are discussed below. The analytical results of the surface and subsurface soil samples collected during the initial phase of site screening were evaluated by comparing the concentration of the various compounds detected to screening criteria, including basewide soil background screening levels, Florida Department of Environmental Protection's (FDEP's) soil cleanup target levels (SCTLs), and USEPA Region III risk-based concentrations (RBCs).

Groundwater analytical data are compared to background screening values, FDEP groundwater cleanup target levels (GCTLs), Federal maximum contaminant levels (MCLs), and USEPA Region III RBCs for tap water.

Analytical results from the surface soil, subsurface soil, groundwater, surface water, and sediment collected from SA 17 are presented as summary of detections tables in Appendix B. A complete set of analytical results for these media are presented in Appendix C. Exceedances of background screening or regulatory

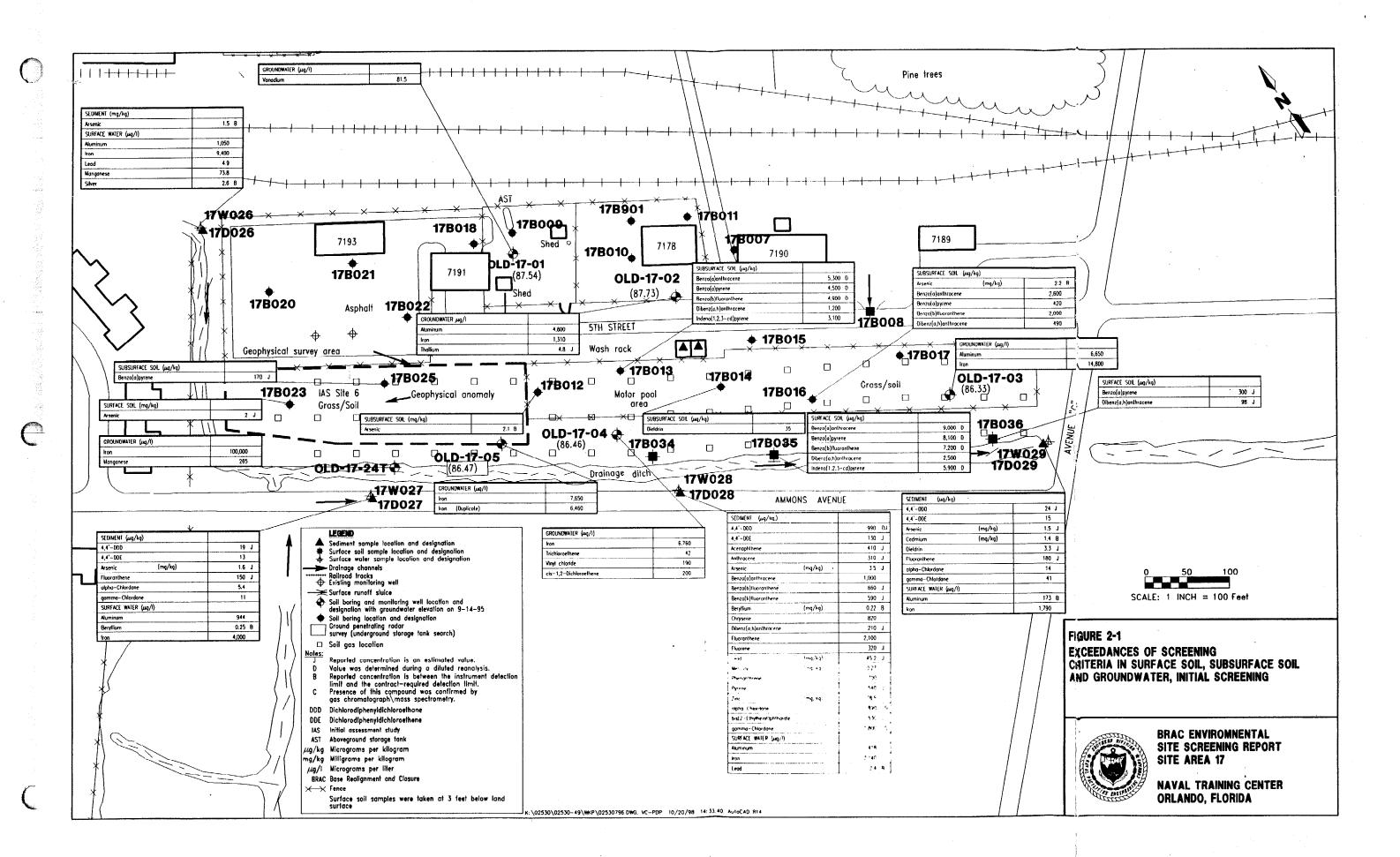
guidance concentrations are displayed in chemical boxes near their respective explorations on Figure 2-1 (and shaded in the Summary of Detections Tables, Appendix B).

- 2.2.1 Geophysical Surveys Geophysical surveys conducted around Buildings 7178, 7190, and 7191 did not reveal the presence of any USTs. Survey results at IAS-6, however, indicated the presence of a relatively large buried object(s). Six test pit excavations were placed throughout this area during a subsequent screening event. Buried construction debris, including lumber, metal fragments, and glass, were uncovered in the excavations. There was no evidence of buried drums in the area. Additional information regarding the methodology and results of the geophysical surveys is provided is Appendix D. A complete report of the methodology and results of the test-pitting operation are presented in Appendix E.
- 2.2.2 Passive Soil Gas Surveys All passive soil-gas collectors installed at SA 17 were below detection limits with the exception of one collector placed in the northwest corner of the soil gas survey grid south of Building 7193. The analytical results indicate very low-level detections of benzene and toluene (number SG-662). A complete report on the passive soil gas survey is provided in Appendix F.
- 2.2.3 Surface Soil Both inorganic and organic compounds were detected in the surface soil at concentrations exceeding screening criteria. The only compounds detected at concentrations that exceed the residential SCTLs or RBCs were arsenic including 2-methylnaphthalene, acenaphthene, anthracene. benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, butylbenzylphthalate, chrysene, dibenz(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, and phenanthrene. Arsenic was only detected at one location exceeding its respective RBC or SCTL, at boring 17B023 at a concentration of 2 milligrams per kilogram (mg/kg). The PAHs were detected at only two boring locations at concentrations exceeding screening criteria, at 17B035 and 17B036. The highest PAH concentrations were detected at soil boring 17B035. Several PAH detections exceeded both residential and industrial RBCs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, carbazole, dibenz(a,h) anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene. At location 17B036, benzo(a)pyrene and dibenz(a,h)anthracene exceeded their respective residential RBC but not industrial RBCs.

Several other inorganic compounds were detected at concentrations above background screening values, including arsenic, cadmium, calcium, copper, lead, manganese, mercury, silver, sodium, thallium, and zinc.

A summary of detections in surface soil analytical results is presented in Table B-1, Appendix B. The complete summary of soil analytical results is presented in Table C-1, Appendix C.

2.2.4 Subsurface Soil As with the surface soil, the only compounds detected in the subsurface soil samples at concentrations exceeding screening criteria were arsenic and PAHs. The PAHs were detected at concentrations exceeding screening criteria at locations 17B013, 17B016, and 17B025. At 17B013 and 17B016 the concentrations of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene exceeded their respective residential RBCs. However, the only compounds detected at concentrations that



exceed their respective industrial RBCs were benzo(a)pyrene and dibenz(a,h)-anthracene at 17B013. PAH compounds were also detected at locations 17B014 and 17B025, but the only exceedance of screening criteria was the benzo(a)pyrene detection at 17B025. The concentration exceeds its residential RBC.

Arsenic was detected at two locations at a concentration exceeding screening criteria - at 17B012 at 2.1 mg/kg and 17B016 at 2.2 mg/kg. Both of these concentrations exceed the residential RBC but not the industrial RBC. Other inorganic compounds, including aluminum, arsenic, barium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, sodium, thallium, vanadium, and zinc were detected above background screening values but below their respective RBC values.

A summary of the detections in subsurface soil is presented in Table B-2, Appendix B. The complete summary of soil analytical results is presented in Table C-1, Appendix C.

2.2.5 Groundwater The only compounds detected in the groundwater at concentrations that exceed screening criteria were the chlorinated VOCs and inorganics.

The chlorinated VOCs were detected only at monitoring well OLD-17-04A. The compounds that exceeded their respective GCTLs or MCLs were trichloroethene (TCE) at 42 micrograms per liter ($\mu g/l$), vinyl chloride at 190 $\mu g/l$, and cis-1,2-dichloroethene (DCE) at 200 $\mu g/l$.

The inorganic compound detections in groundwater which exceed background screening values include aluminum, iron, manganese, thallium and vanadium. The FDEP secondary standard and background screening values for aluminum were exceeded in two monitoring wells (OLD-17-02A and OLD-17-03A) whereas iron (also a secondary standard) was exceeded in all groundwater samples except 17G001. The vanadium concentration detected at OLD-17-01A at 81.5 $\mu g/\ell$ exceeds the screening criteria GCTL of 49 $\mu g/\ell$. The manganese concentration at well OLD-17-24T was 265 $\mu g/\ell$, exceeding Florida's secondary standard of 50 $\mu g/\ell$, and the tap water RBC of 180 $\mu g/\ell$. Thallium was detected at well OLD-17-02A at a concentration of 4.8 $\mu g/\ell$, which slightly exceeds the FDEP GCTL and Federal MCL of 2 $\mu g/\ell$, the tap water RBC of 2.9 $\mu g/\ell$, and background screening value of 3.8 $\mu g/\ell$.

A summary of the detections in groundwater is provided in Table B-3 of Appendix B. The complete summary of analytical results is presented in Table C-3 of Appendix C.

2.2.6 Surface Water The only exceedances of screening criteria detected in surface water samples were aluminum, iron, manganese, and zinc. Aluminum and iron screening values were exceeded in all surface water samples. Manganese exceeded its screening value at location 17W026, and likewise for zinc in 17W027.

A summary of the detections in surface water is presented in Table B-4 of Appendix B. The complete summary of analytical results is presented in Table C-4 of Appendix C.

2.2.7 Sediment Several compounds were detected in sediment samples at concentrations exceeding screening criteria, including PAHs, pesticides, and inorganics. Sample 17D02601 had only arsenic at a concentration exceeding screening criteria. Sample 17D02701 had exceedances of PAHs, pesticides, and

inorganics. Sample 17D02801 had exceedances of PAHs, pesticides, and inorganics. A summary of the detections in sediment is presented in Table B-5, Appendix B. The complete summary of analytical results is provided in Table C-5 of Appendix C.

3.0 EVALUATION OF POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL

The objective of the PAH evaluation was to gather additional soil analytical data to permit better characterization of the nature and extent of PAHs in soil. The field program is described in detail in a letter workplan dated December 20, 1996 (ABB-ES, 1996).

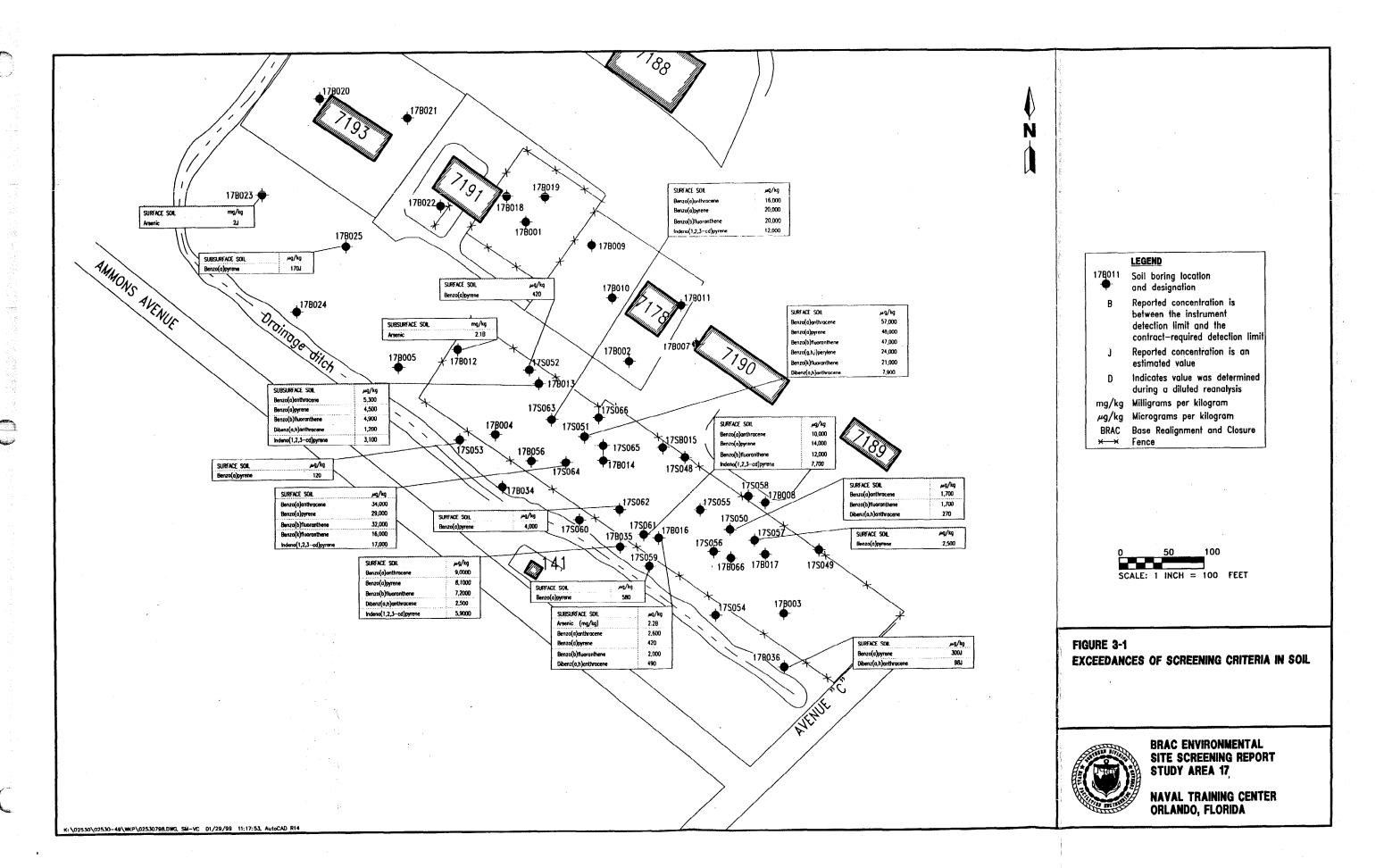
3.1 FIELD PROGRAM. The PAH evaluation was performed using a two-phase approach. During the first phase, soil samples were collected for field screening using immunoassay (IA) analysis techniques to allow for general delineation of the concentrations of PAHs in surface and subsurface soil. During the second phase, additional soil samples were collected for laboratory analysis to confirm the IA analyses. Delineation efforts were limited to the upper three feet of the subsurface. The field investigation was performed during the months of October and November, 1996.

The locations of all soil samples collected during the initial screening event and the subsequent PAH evaluation are shown on Figure 3-1. Also shown are the detections of all analytes exceeding the screening criteria for surface soil.

3.1.1 Field Screening Using IA Analysis During the first phase of the program, a grid coordinate system was established around the original soil sampling location (178035) where the highest PAH concentrations were measured. Sample 17803501 was collected from the area between the fence of the former motor pool yard and the drainage canal. Ten soil samples were collected from five points (designated 178037/178037 through 178041/178041) located approximately 25 feet to the west, north, and east of 178035. Two samples were collected at each location - one from 0 to 1 foot bls ("S" designation) and one from 2-3 foot bls ("B" designation).

Each sample was analyzed using IA analysis. This technique provides a rapid, semiquantitative measurement of the total PAH concentration, but cannot distinguish between the types of PAH compounds present. Analysis is accomplished by first performing an extraction of the collected sample, then mixing the extracted fluid with an enzyme. The enzyme reacts with the PAHs present and, when the mixture is exposed to light, it displays an optical signature that varies inversely with the total PAH concentration. Through comparison of the optical density of standard samples with known PAH concentration to that of the test samples, a curve can be generated that correlates optical density to PAH concentration.

3.1.2 IA Testing Results The IA results on the first 10 samples indicated elevated PAH concentrations in one or both sampling intervals at the majority of the sampling locations. As a result, the grid was expanded another 50 feet to the west, north, and east, and samples were collected at six additional locations. The samples were designated 178042/178042 through 178047/178047 with sampling from the same two depth intervals - 0 to 1 foot bls and 2 to 3 foot bls. Each sample was analyzed using IA. As with the first five points, the results indicated that the total PAH concentration is elevated (in excess of 10,000 micrograms per kilogram [μ g/kg]) for a distance of 75 feet from the original sampling point (178035). The concentration is particularly high to the west and



north of 17B035. A complete listing of the IA results on the soil samples is presented in Table 3-1.

A total PAH concentration of 1,800 $\mu g/kg$ was used as a guidance concentration during the investigation to determine areas to expand the sampling grid. This concentration was derived by considering that benzo(a)pyrene is the PAH compound with the lowest regulatory guidance concentration with a residential RBC of 88 $\mu g/kg$. Each of the samples collected and analyzed during initial screening indicated that benzo(a)pyrene represented approximately 5 percent of the measured total PAH concentration. Assuming that ratio is consistent across the site, then a total PAH concentration of approximately 1,800 $\mu g/kg$ would represent the threshold value where the regulatory limit would likely be exceeded. The only samples analyzed by IA which indicated a total PAH concentration less than 1,800 $\mu g/kg$ were 178037, 178040, 178041, and 178042. The total PAH concentration is very high for a distance of at least 75 feet to the west and north, and decreases slightly to the east (sampling points 17S041/17B041 and 17S042/17B042).

- 3.2 CONFIRMATION SAMPLING. In order to confirm the IA testing results and to quantify the various PAH compounds present, soil samples were collected from selected locations for laboratory analysis. Confirmation sampling was performed during two events - one in November 1997 and the second in November 1998. During the first event, soil samples were collected from seven locations (designated 17S048/17B048 through 17S054/17B054), with two samples collected at each One sample was collected from 0 to 1 foot bls at all six sample locations ("S" designation), and the remainder ("B" designation) were collected from 2 to 3 foot bls. During the second event, 12 additional surface soil samples (178055 through 178066) were collected to further delineate hot spots. and to support preparation of a work plan for a potential interim remedial action (HLA, 1999). All of the confirmatory samples were submitted to an approved laboratory for analysis of PAHs using USEPA Test Method 3510/8270M, in accordance with USEPA Level IV DQOs.
- 3.3 CONFIRMATION RESULTS. Eight of the 26 confirmation samples submitted to the laboratory had PAH concentrations that exceed industrial screening criteria. Sample 17S05001 had detections of several compounds, but the only compounds that exceeded industrial screening criteria were benzo(a)pyrene (concentration of $1,700 \mu g/kg)$, benzo(b)fluoranthene (1,700 $\mu g/kg$), and dibenz(a,h)anthracene (270 $\mu g/kg$). At sample 17S05101, benzo(a)anthracene (concentration of 57,000 $\mu g/kg$), benzo(a)pyrene (48,000 μ g/kg), benzo(b)fluoranthene (47,000 μ g/kg), benzo(g,h,i)perylene (24,000 μ g/kg), benzo(k)fluoranthene (21,000 μ g/kg), and dibenz(a,h)anthracene (7,900 µg/kg) all exceeded screening criteria. Sample 17S05701 had a detection of benzo(a)pyrene at a concentration of 2,500 μg/kg. 17S05901 had a detection of benzo(a)pyrene at a concentration of 580 μ g/kg. Sample 17B06101 had detections of benzo(a)pyrene (14,000 μ g/kg), benzo(a)anthracene $(10,000 \,\mu\text{g/kg})$, benzo(b) fluoranthene $(12,000 \,\mu\text{g/kg})$, and indeno(1,2,3-cd)pyrene $(7,700 \, \mu g/kg)$. Sample 17B06201 had a detection of benzo(a)pyrene at a concentration of 4,000 $\mu g/kg$. Sample 17B06301 had detections of benzo(a)pyrene $(20,000 \mu g/kg)$, benzo(a)anthracene $(16,000 \mu g/kg)$, benzo(b)fluoranthene $(20,000 \mu g/kg)$ μ g/kg), and indeno(1,2,3-cd)pyrene (12,000 μ g/kg). Sample 17B06401D had detections of benzo(a)pyrene (29,000 µg/kg), benzo(a)anthracene (34,000 µg/kg), benzo(b)fluoranthene (32,000 μ g/kg), benzo(k)fluoranthene (16,000 μ g/kg), and indeno(1,2,3-cd)pyrene (17,000 μ g/kg).

Table 3-1 Polynuclear Aromatic Hydrocarbon Immunoassay Testing Results

Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

		Immunoassay Results	
Sample Location	Sampling Interval (feet bis)	Optical Density	Total PAH Concentration (µg/kg)
17S037	0 to 1	. 0.32	4,500
17B037	2 to 3	0.47	900
17S038	0 to 1	0.06	30,000
17B038	2 to 3	0.06	30,000
178039	0 to 1	0.03	60,000
17B039	2 to 3	0.06	30,000
178040	0 to 1	0.04	45,000
17B040	2 to 3	0.42	1,000
17S041	0 to 1	0.30	4,800
17\$042	0 to 1	0.38	1,200
17B042	2 to 3	0.50	500
178043	0 to 1	0.12	25,000
17B043	2 to 3	0.16	18,000
17S044	0 to 1	0.21	15,000
17B044	2 to 3	0.09	30,000
17S045	0 to 1	0.12	20,000
17B045	2 to 3	0.12	20,000
17S046	0 to 1	0.12	20,000
17B046	2 to 3	0.10	26,000
17S047	0 to 1	0.12	20,000
17B047	2 to 3	0.11	23,000

Notes: Immunological testing methods based on USEPA Methods SW846 and 4035.

bls = below land surface.

PAH = polynuclear aromatic hydrocarbon.

 μ g/kg = micrograms per kilogram.

A summary of the detections in surface and subsurface soil during confirmation sampling is presented on Figure 3-1, and Tables B-1 and B-2 of Appendix B. A complete summary of analytical results for these media is presented in Tables C-1 and C-2 of Appendix C.

4.0 GROUNDWATER EVALUATION

The supplemental groundwater screening investigation consisted of two phases. Following a resampling effort designed to confirm the chlorinated VOC exceedances at OLD-17-04A, the first phase was implemented to determine whether the plume was isolated to the immediate area of the well. When the Phase I results established that the plume did indeed extend over a significant area, the OPT requested that a more extensive field program be designed and implemented to determine the nature and extent of the groundwater plume. Phase II of the supplemental screening was performed in response to that request.

4.1 PHASE I FIELD PROGRAM. The Phase I field investigation was performed during the months of January and February 1997.

Five new monitoring wells were installed during the Phase I investigation. Four of the wells were installed as microwells using direct-push technology (DPT). These wells were designated OLD-17-06A through OLD-17-09A. The wells were placed in a cross pattern generally oriented east-west with OLD-17-04A located in the center. The four microwells were constructed with 3/4-inch-diameter PVC riser and 0.010-inch slotted screen. The screened section was pre-packed with a 20/30 silica sand filter pack. Nine feet of slotted screen was used for each well. A two-foot thick bentonite seal was placed above the filter pack, and the remainder of the borehole annulus was filled with grout. The microwells were completed at the surface with a concrete pad, bolt-down vault, and locking cap.

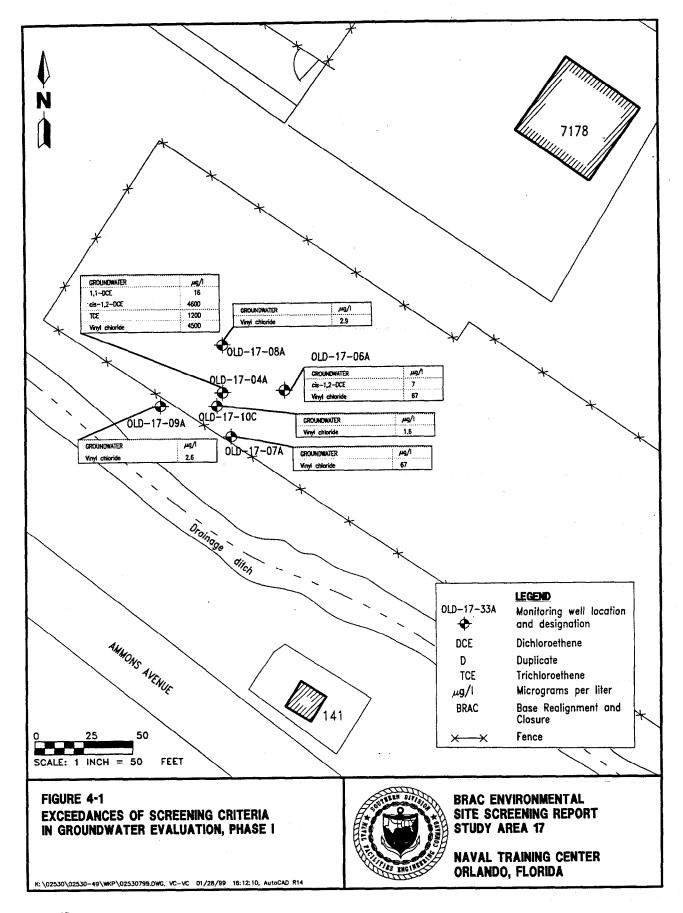
The fifth monitoring well, OLD-17-10C, was installed to test the quality of the groundwater at the base of the surficial aquifer in the immediate vicinity of OLD-17-04A. The well was constructed with 2-inch-diameter PVC riser and 0.010-inch slotted screen. The boring around the well screen was filled with a 20/30 silica sand filter pack. The filter pack was sealed with a layer of bentonite, and the borehole annulus was grouted to the surface. The well was completed at the surface with a concrete pad, bolt-down vault, and locking cap.

Following development and a period of stabilization, groundwater samples were collected from the five new wells and OLD-17-04A. The samples were submitted to an approved, off-site laboratory for analysis of VOCs using USEPA Test Method 524.2. All of the field data sheets associated with monitoring well installation and sampling during the Phase I supplemental work, including the soil boring logs, well construction diagrams, and the development and sampling data sheets, are provided in Appendix A.

4.2 PHASE I RESULTS. Chlorinated VOCs were detected in the groundwater samples collected from all five of the newly installed monitoring wells. A summary of the detections in groundwater is provided in Table B-3, Appendix B, and depicted on Figure 4-1. The complete summary of analytical results is presented in Table C-3 of Appendix C.

Vinyl chloride was detected at concentrations that exceed GCTLs in the samples collected at all six well locations. The concentration of vinyl chloride ranged from 1.4 $\mu g/\ell$ in the sample collected from OLD-17-10C (17G01001) to 450 $\mu g/\ell$ in the sample at OLD-17-04A (17G00403). The only other compound detected in all six

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samples was cis-1,2-DCE. The concentration ranged from 3.4 $\mu g/l$ at OLD-17-10C to 460 $\mu g/l$ at OLD-17-04A. Only the sample from OLD-17-04A had a concentration of cis-1,2-DCE that exceeded the GCTLs. TCE was detected in only two samples - at 120 $\mu g/l$ in 17G00403 and at 2.3 $\mu g/l$ in 17G01001. The sample from OLD-17-04A was the only sample where the concentration of TCE exceeded regulatory criteria. The only other compounds detected were 1,1-DCE and trans-1,2-DCE in 17G00403, at concentrations of 16 and 6.9 $\mu g/l$, respectively. Only 1,1-DCE was detected at a concentration that exceeds the GCTL. A summary of the detections in groundwater is presented in Table B-3 of Appendix B. The complete summary of analytical results is provided in Table C-3 of Appendix C.

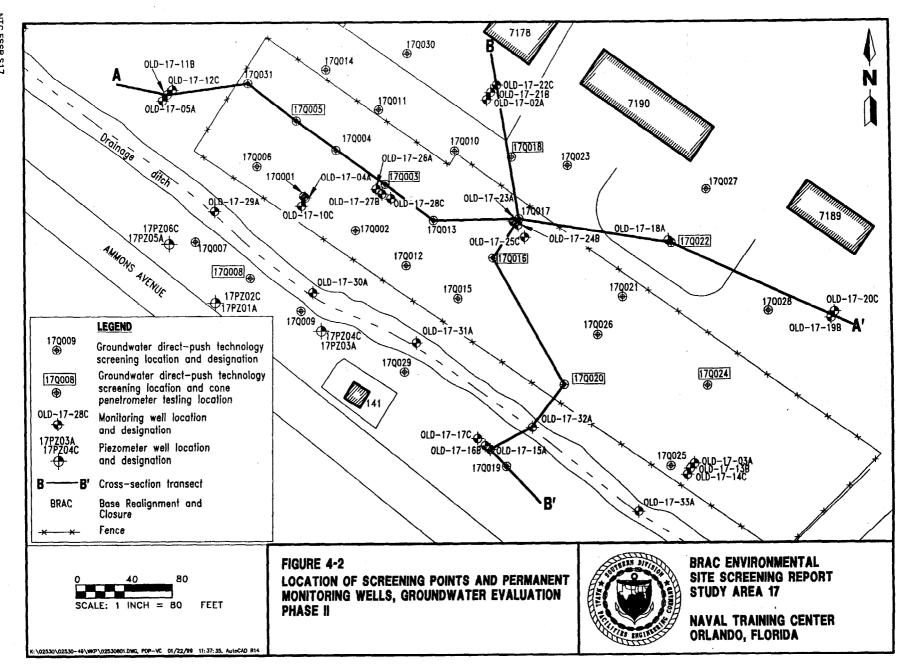
The results of the Phase I investigation demonstrated that the plume of chlorinated VOCs extended laterally for a distance of at least 25 feet in all directions from OLD-17-04A, and that the plume had migrated vertically to a depth of at least 65 feet bls.

- 4.3 PHASE II SCREENING PROGRAM. The objective of the Phase II field program was to collect the additional data necessary to better define the areal limits of the chlorinated VOC plume. This was to be accomplished in accordance with a workplan submitted in March 1997 (ABB-ES, 1997b), and involved an extensive groundwater screening program using DPT and an on-site field analytical laboratory. The screening program was to be followed by the installation of permanent monitoring-well clusters to confirm the screening results. Soil samples were also collected from potential source release areas, and surface water and sediment samples were collected from the drainage canal. The investigation also involved an evaluation of the groundwater flow properties.
- 4.3.1 Cone Penetrometer Testing (CPT) Phase II of the groundwater evaluation began with CPT to characterize the subsurface lithology across the site, and to target areas for groundwater sample collection. This type of testing is performed with DPT and utilizes hydraulics to advance a piezocone, which is a device to measure lithologic parameters. Resistance to penetration at the piezocone tip and at the outer surface of the sleeve is recorded. Subsurface pore pressure is monitored with a pressure transducer. These measurements are recorded by a field computer, and the data are compared to empirically derived measurements or parameters characteristic of different soil types. Piezocone data provides soil classifications consistent with the Unified Soil Classification System (USCS).

CPT was performed at four locations (17Q003, 17Q005, 17Q008, and 17Q011) initially, but additional tests were performed at five more locations (17Q016, 17Q018, 17Q020, 17Q022, and 17Q024) as the investigation area expanded (Figure 4-2). Each CPT exploration was advanced to at least the top of the shallowest clay unit within the Hawthorn Group because that horizon typically marks the base of the surficial aquifer.

The DPT rig was also utilized to install six piezometers (designated 17PZ01 through 17PZ06) at three locations on the south side of the drainage canal (Figure 4-2). Each cluster consisted of a shallow and a deep piezometer.

The shallow piezometers were constructed with 10 feet of screen bracketing the water table. The deep piezometers were constructed with 5 feet of screen located



at the base of the surficial aquifer. All of the piezometers were constructed of 3/4-inch-diameter PVC.

4.3.2 Groundwater Screening The first nine DPT explorations (designated 17Q001 through 17Q009) were placed within an arbitrary grid on (nominal) 50-foot centers around monitoring well OLD-17-04A. The grid was eventually expanded eastward and southward because of the configuration of the plume. A total of 185 groundwater samples were collected from 31 DPT explorations (designated 17Q001 through 17Q031) during the investigation (Figure 4-2). At the majority of the DPT explorations, groundwater samples were collected at a 5-foot interval to a depth of 30 feet bls, and at a 10-foot interval from 30 feet to 60 feet bls. At the remainder of the DPT locations, the sampling interval was 10 feet throughout the length of the exploration. The majority of the groundwater sampling points are located within the fenced compound. Several explorations (17Q007 through 17Q009, 17Q019, and 17Q029) were placed south of the drainage canal, and explorations 17Q010, 17Q011, 17Q014, 17Q018, 17Q022, 17Q023, 17Q027 17Q028, and 17Q031 were placed in the area between the former motor pool compound and Buildings 7178, 7190, and 7189.

The field analytical methods used were based on standard USEPA Methods SW-846, 5030 (purge and trap preparation), 8000A (GC calibration), and 8010A (halogenated VOCs). In addition to the chlorinated VOCs (tetrachloroethane, TCE, 1,1-DCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride), samples were also analyzed for four petroleum hydrocarbon VOCs (benzene, toluene, ethylbenzene, and xylene [BTEX]).

On-site Laboratory Quality Control. Quality control criteria for the on-site analytical methods were established to monitor method performance. An initial three-point calibration for quantification (low-, mid-, and high-range concentrations) was performed for each instrument. Instrument stabilities were monitored every 24 hours with a calibration standard at the mid-range concentration. quantification performance criterion for operation was the agreement of the check standard with the three-point calibration curve to within 30 percent. samples were to be analyzed only if no more than one compound per detector in the check standard exceeded these criteria. If the check standard did not meet this criterion, then a second check standard was analyzed. If this second check failed to meet the criterion, then a new calibration curve was prepared. identities of the target compounds were based on comparison with the retention times for the standards. Retention time windows of plus or minus three percent were established, based on the most recent calibration curve. In some instances, the peak was so broad that a three percent retention time window was not adequate, and operator judgement was applied.

Periodic method blanks comprised of deionized water were analyzed to confirm that no target compounds were introduced during sample handling and analysis. The method blank criterion was met if no target compounds were present above the reporting limit for the instrument. A surrogate solution containing bromofluorobromine was injected into each sample at a known concentration to determine percentage recoveries. The recovery range of 50 to 150 percent was established for water samples, and the recovery range of 30 to 170 percent was established for soil samples as one of the operating criteria for on-site analysis. Approximately 20 percent of the samples were submitted to an off-site laboratory to check precision and accuracy of the on-site analytical procedure. Off-site samples were analyzed for the same VOCs using USEPA Test Method 524.2.

4.3.3 Soil Screening Soil screening was performed to determine the presence of VOCs in soil. Soil screening was concentrated at two areas where the highest VOC concentrations were detected at the water table, for these areas could represent surface release points. Soil samples were collected on 50-foot centers within two grids centered on the "hot spots." Nine soil borings (designated 178055 through 178063) were established in one area, and 11 borings (178064 through 178074) were advanced in the second area. Soil samples were collected from the two-foot interval immediately above the water table.

Each soil sample was analyzed on site for the presence of organic vapors using a flame ionization detector (FID). This was accomplished by first placing the sample in a glass container and immediately sealing the container. After allowing the sample to equilibrate for a period not exceeding 15 minutes, the container lid was punctured and an FID was inserted through the lid to measure the concentration of any organic vapor in the headspace of the container. Each sample was first analyzed without a methane filter over the inlet of the FID to get a reading of the total organic vapor concentration present. Then, the filter was added to remove any vapor present excluding methane, and a second reading was taken. The difference in the two readings can then be attributed to the concentration of hydrocarbon vapors present in the sample.

Two soil samples (17B05501 and 17B06601) were submitted to an off-site laboratory for confirmation analysis using USEPA Test Method 8010. The selected samples were collected from the locations with the highest hydrocarbon vapor concentration from each source during the headspace testing survey.

- 4.4 PHASE II SCREENING RESULTS. The results of the screening part of the Phase II program are presented below.
- 4.4.1 Cone Penetrometer Testing CPT surveys were performed at selected DPT explorations. The CPT results allowed HLA to determine the local lithology of the site to a depth of 65 feet bls across most of the site. The upper 65 feet of the subsurface is comprised of variable percentages of unconsolidated clay, silt, and sand. The upper 30 feet consists primarily of fine sand with the exception of two thin (approximately 5 to 10 feet), discontinuous layers of silty sand. The upper surface of the shallowest silty sand layer was encountered from 10 to 15 feet bls on the west side of the former motor pool area. The silty sand layer dips slightly to the east and northeast and is interpreted to be approximately the same thickness throughout the area. The lower silty sand layer is continuous beneath the site at a depth ranging from 25 to 30 feet bls. This layer thins slightly to the north and east within the investigation area.

Below the deeper layer of silty sand, there is a layer of fine- to coarse-grained sand that extends from 30 to 50 feet bls. The upper surface of this sand marks the top of the Hawthorn Group sediments. Beneath this upper Hawthorn sand layer is a silty sand layer that extends from 50 to 55 feet bls, and it is everywhere underlain by an approximately 10-foot-thick section of sandy, silty clay. The percentage of clay in this unit is variable across the site and generally decreases to the north and east. The top of the clay marks the base of the surficial aquifer, and is underlain by a layer of fine- to coarse-grained sand 5 to 8 feet in thickness.

The two silty sand layers in the upper 30 feet of the surficial aquifer effectively divide the aquifer into shallow, intermediate and deep units. The section between the water table and the shallower of the two silty sand layers is the shallow unit; the section between the two silty sand layers is the intermediate unit, and the section between the lower silty sand and the Hawthorn Group clay is the deep unit.

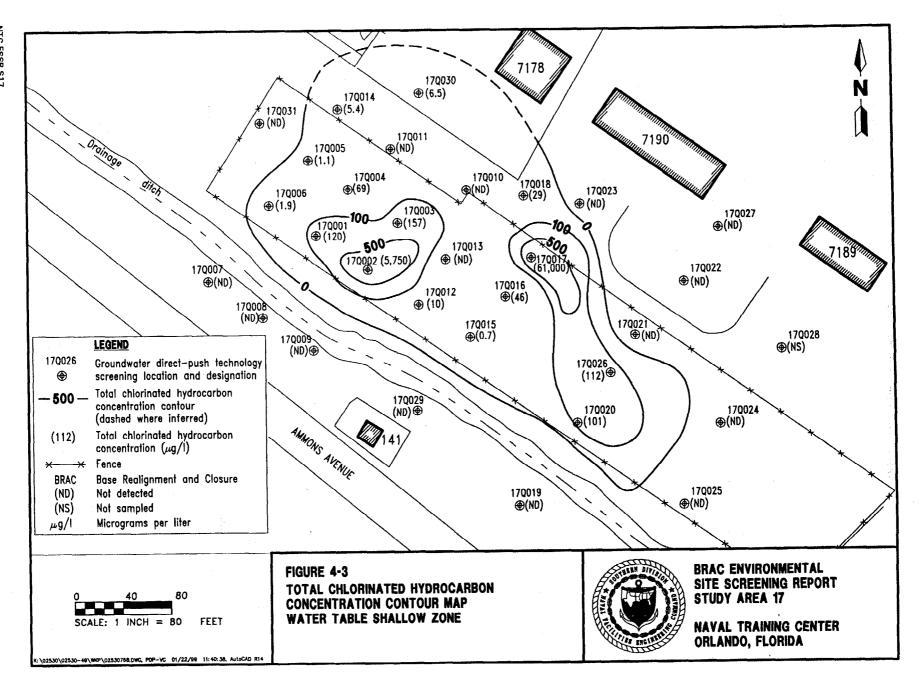
A complete report of the CPT survey results are presented in Appendix G.

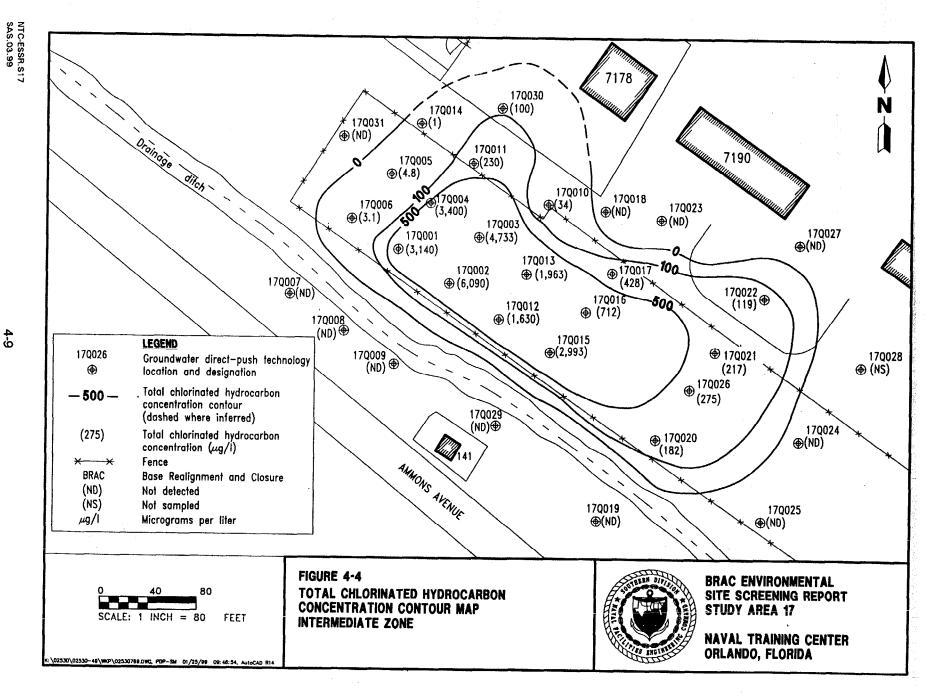
4.4.2 Groundwater Screening The groundwater screening results indicate that the plume of chlorinated VOCs encompasses an area measuring approximately 150,000 square feet, or approximately 3 acres. The geometry of the plume is best demonstrated by plotting the total VOC concentration measured at three key depth intervals: 5 to 10 feet bls near the water table, in the intermediate range of the surficial aquifer (15 to 20 feet bls), and at the base of the surficial aquifer (35 to 40 foot bls). These data are presented in contour plots for the three intervals as Figures 4-3, 4-4, and 4-5 respectively. The groundwater plume is contained within the boundary of SA 17. The highest concentrations of chlorinated VOCs detected at the water table are found at screening points 17Q002 and 17Q003 and at 17Q017, suggesting that these areas may represent release points of the contaminants to the environment. The total VOC concentrations at 17Q002 and 17Q003 are in the range of 3,000 to 5,000 $\mu g/\ell$. At 17Q017, TCE was detected at a concentration of 61,000 $\mu g/\ell$. The VOC concentrations along the water table decrease gradually southeastward.

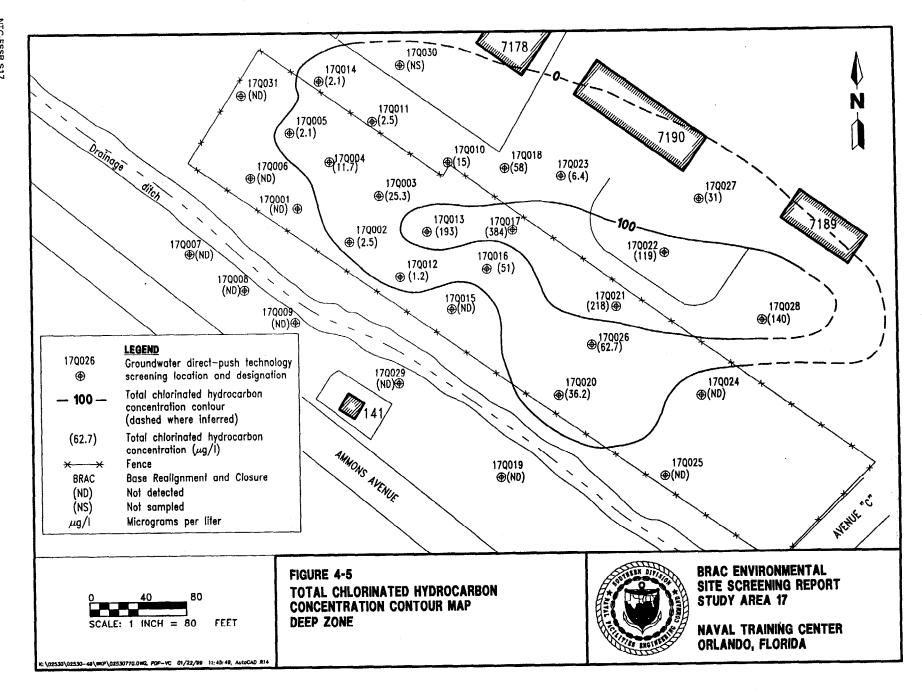
Samples collected from the water table south of the drainage canal at 17Q007, 17Q008, and 17Q009 had no detections of chlorinated VOCs. The highest VOC concentrations were detected in the shallow and intermediate depth units of the surficial aquifer under both source areas. At screening points 17Q002 and 17Q003, the total concentration of chlorinated compounds ranged from 5,000 to 10,000 $\mu g/\ell$. At 17Q017, the concentration of every VOC was at least 1,000 $\mu g/\ell$ at the intermediate depth interval, and the concentration of TCE was 84,000 $\mu g/\ell$. VOCs were detected over a wider area at this interval, with detections at screening point 17Q030 to the northwest, 17Q001 in the southwest, and 17Q020 and 17Q026 to the east.

VOC concentrations decreased significantly in the deep unit of the surficial aquifer. The total VOC concentration detected in samples collected in the deep unit in the western source area ranged from 10 to 50 $\mu g/\ell$. The total VOC concentration at that interval in the eastern source area (at 17Q017) ranged from 50 to 100 $\mu g/\ell$. The highest VOC concentrations were detected in samples collected immediately below the deeper silty sand layer (at the 35- to 40-foot bls interval), and the concentrations decreased with depth. Contaminated groundwater at this depth covers a wider area than the interval above the shallow silty sand layer. Detections were measured in samples collected at this depth at screening point 17Q030, in the northwest part of the grid, to 17Q001 in the southwest, and to points 17Q020 and 17Q026 in the east. VOCs were also detected at this interval at screening points 17Q022 and 17Q028 along the northeast corner of the screening grid.

Contaminated groundwater was also detected below the shallowest clay in the Hawthorn Group in both source areas. In the sample collected from the depth interval of 55 to 60 feet bls at 17Q003, total VOC concentrations were from 15 to 20 $\mu g/\ell$. At 17Q017, total VOCs in the sample collected from the same depth







interval ranged from 60 to 65 μ g/ ℓ . Contaminated groundwater below the Hawthorn Group clay is limited to the immediate area of both source areas.

The four BTEX compounds (benzene, toluene, ethylbenzene, and xylene) were also detected in samples collected along the upper surface of the shallow sandy silt layer in both source areas. The total concentration of these compounds in any given sample was generally less than 10 $\mu g/\ell$. A listing of the on-site groundwater analytical results is provided in Appendix H.

Eighteen of the groundwater screening samples were submitted to an off-site laboratory for confirmation of the field screening results. On-site field laboratory results generally compare favorably to off-site analytical laboratory results, especially in the lower total VOC concentration range. Six of the samples had no detections with the on-site laboratory. The nondetections were confirmed in five of the samples with the off-site results, and the sixth sample had only a minor detection of 1 $\mu g/l$. The off-site results for the remaining samples where significant detections occurred indicated that the on-site laboratory detected the same compounds. The on-site laboratory accurately detected (within 10 percent) a given compound's concentration 90 percent of the time. A summary of the detections in off-site groundwater confirmation samples is presented in Table B-3 of Appendix B. A summary of the complete analytical results is presented in Table C-3 of Appendix C.

4.4.3 Soil Screening The results of the soil vapor headspace survey are presented in Table 4-1. The net organic vapor concentration (i.e., vapor concentration attributed to source other than methane) was plotted and contoured on Figure 4-6.

The highest net vapor concentration in the western source area was 70 ppm at boring 178056. The highest concentration in the eastern source area was over 400 ppm at boring 178066. The areal limits of the vadose zone containing hydrocarbon vapors generally conform to the limits of the contamination along the water table surface, with the exception that the highest soil vapor concentrations were actually measured in samples collected from areas located 25 to 50 feet downgradient of the suspected source areas. This may be the result of a number of factors, including the permeability of the soil in the vadose zone.

Duplicate samples collected at locations 17B056 and 17B066 were submitted to an off-site laboratory to analyze for the presence of any chlorinated VOCs. No VOCs were detected in either sample. A summary of the complete analytical results is presented in Table C-1 of Appendix C.

4.5 PHASE II GROUNDWATER CONFIRMATION PROGRAM. The Phase II groundwater confirmation program was designed to confirm the DPT screening results. Permanent monitoring wells were installed to sample groundwater at various depth intervals to determine groundwater quality. Other aspects of the program involved the collection of surface water and sediment samples from the drainage canal, as well as groundwater samples from drive points installed at the base of the canal. The program also involved a characterization study of groundwater flow patterns, and included water-elevation measurements and slug testing.

Table 4-1 Soil Vapor Headspace Survey Results

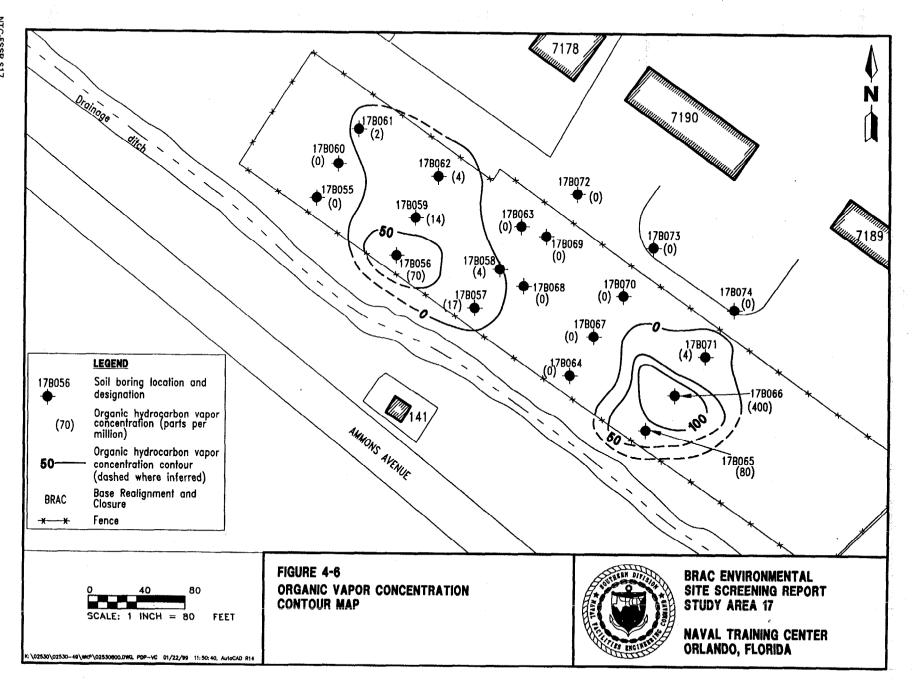
Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

Boring Identifier	Sampling Interval (feet bis) ¹	Unfiltered Vapor Concentration (ppm)	Filtered Vapor Concentration (ppm)	Net Organic Vapor Concentration ² (ppm)	Comments
17B055	1 to 3	10	0 ·	0	
17B056	1 to 3	80	10	70	Location with the highest hydrocarbon vapor concentration in the western source area. Duplicate sample submitted to offsite laboratory for Contract Laboratory Program (CLP) analysis.
17B057	1 to 3	25	8	17	
17B058	1 to 3	12	8	4	
17B059	1 to 3	30	16	14	A STATE OF THE STA
17B060	. 1 to 3	0	0	0	
17B061	1 to 3	2	0	2	
17B062	1 to 3	12	8	4	
17B063	1 to 3	5	5	0	
17B064	1 to 3	1	1	0	
17B065	1 to 3	180	100	80	
17B066	1 to 3	700	300	400	Location with the highest hydrocarbon vapor concentration in the eastern source area. Duplicate sample submitted to offsite laboratory for CLP analysis.
17B067	1 to 3	0	0	0	
17B068	1 to 3	0	0	0	
17B069	1 to 3	10	0	0	
17B070	1 to 3	0	0	0	
17B071	1 to 3	10	6	4	
17B072	1 to 3	0	0	0	
17B073	1 to 3	0	0	0	
17B074	1 to 3	0	0	0	

¹ Water table measured at a depth of approximately 3 feet bls.

Notes: bls = below land surface. ppm = parts per million.

² The headspace in each soil sample was analyzed with a flame ionization detector (FID). Unfiltered concentration represents the total of all organic vapors present. Filtered concentration represents what part of the total concentration can be attributed to methane (charcoal filter adsorbs all vapors except for methane). Therefore, the net concentration represents the total vapor concentration which can be attributed to refined hydrocarbons.



4.5.1 Monitoring Well Placement and Construction Eighteen new monitoring wells were installed during the Phase II program. The new wells were incorporated with the existing wells from earlier studies to form a network of seven well clusters. Each cluster consists of a shallow ("A" designation) well, an intermediate-depth well ("B" designation), and a deep well ("C" designation). All of the shallow wells are screened at the water table, and all of the intermediate wells are screened in the intermediate unit of the surficial aquifer. The deep wells for the clusters installed in the source areas are screened in the intermediate aquifer, immediately below the shallowest clay in the Hawthorn Group. The deep wells at the other five clusters are screened in the deep unit of the surficial aquifer immediately above the clay. The monitoring well network was designed to confirm the nature and extent of the chlorinated VOC plume and, where possible, to quantify the VOCs present at critical locations within the plume boundary.

Monitoring wells OLD-17-11B and OLD-17-12C were installed adjacent to existing shallow well OLD-17-05A (Figure 4-2) to confirm the western limits of the plume. Wells OLD-17-13B and OLD-17-14C were installed adjacent to existing well OLD-17-03A to confirm the eastern limits of the plume. Monitoring wells OLD-17-15A, OLD-17-16B, and OLD-17-17C were installed along the south side of the drainage canal. OLD-17-18A, OLD-17-19B, and OLD-17-20C were installed to confirm the northeastern limits of the plume. New wells OLD-17-21B and OLD-17-22C were installed adjacent to existing shallow well OLD-17-02A to confirm the northern limits of the plume.

Two clusters were installed in each of the suspected source areas. Wells OLD-17-23A, OLD-17-24B, and OLD-17-25C were installed in the eastern source area, and OLD-17-26A, OLD-17-27B, and OLD-17-28C were installed in the western source area. These wells were designed to quantify the VOCs in the area of highest total VOC concentrations. The deep wells in these two clusters were screened below the clay that marks the base of the surficial aquifer to confirm detections at those depths.

All of the newly installed monitoring wells are constructed with 2-inch, Schedule 40, flush-jointed, threaded PVC screen and riser pipe. The wells are constructed with 0.010-inch screen. The shallow wells are constructed with 10 feet of screen, whereas the intermediate and deep wells are constructed with 5 feet of screen. The deep monitoring wells installed in the two suspected source areas (OLD-17-25C and OLD-17-28C) are constructed with an outer 6-inch-diameter PVC surface casing set into the clay layer at the base of the surficial aquifer to minimize the potential for cross contamination during well construction.

Standard penetration testing (SPT) was performed at each monitoring well cluster to aid in the well design. Samples were collected continuously from the surface to the base of the surficial aquifer using a 2-foot-long, 1-1/2-inch-diameter split-spoon sampler. Each sample was classified using the USCS and screened with an FID. The SPT results were combined with the CPT results to construct a more detailed lithologic profile of the site.

The newly installed monitoring wells were developed to ensure proper formation of the filter pack. This was accomplished by pumping water from the well at varying rates to remove fine soil particles and to improve hydraulic connection with the surrounding aquifer. A minimum of three well volumes were purged from the wells, and purging continued until the turbidity was reduced as much as

possible and the field measurements of turbidity, pH, temperature, and conductivity had stabilized.

4.5.2 Groundwater Sampling Groundwater samples were collected from all 21 monitoring wells in the network of clusters, as well as from existing wells OLD-17-04A and OLD-17-10C. Prior to sample collection, the wells were purged to ensure that groundwater representative of the surrounding aquifer was present in the well. The wells were purged using the low-flow method to minimize volatilization. Purging continued until the turbidity was reduced as much as possible and the field measurements of turbidity, pH, temperature, and conductivity stabilized. The collected samples were submitted to an off-site laboratory and analyzed for the presence of VOCs using USEPA Test Method 524.2.

Field data sheets associated with monitoring well installation and sampling during the Phase II supplemental work, including the soil boring logs, well construction diagrams, and the well development and sampling forms during this phase of the investigation, are provided in Appendix A.

4.5.3 Drive Point, and Surface Water and Sediment Sampling Five drive points (designated OLD-17-29A through OLD-17-33A) were installed through the base of the drainage canal to sample the groundwater immediately below the canal. Surface water and sediment samples (designated 17W030/17D030 through 17W034/17D034) were collected adjacent to (upstream of) each drive point. The five sampling locations were spaced at a (nominal) 100-foot interval along the drainage canal south of the SA. The sample locations were placed approximately one-quarter of the way across the canal, as measured from the north side. The canal was approximately two feet deep at the time of the investigation.

The drive points are constructed of 1-inch-diameter stainless steel. Each point consisted of one foot of slotted screen (0.010-inch slot) and five feet of riser. The screened interval was driven to the point where the top of the screen was approximately six inches below the base of the canal. Each drive point was equipped with a screw cap to prevent water from entering through the top. Drive points were sampled using the same protocol as was used in the sampling of the monitoring wells.

Surface water samples were collected at the midpoint between the water surface and the canal bottom. Prior to sample collection, the temperature, conductivity, pH, and turbidity of the water were measured and recorded. The sediment samples were collected with stainless steel hand augers. Surface water and sediment samples were submitted to an off-site laboratory for analysis of volatile compounds by USEPA Test Methods 524.2 and 8010, respectively.

4.5.4 Groundwater Flow Evaluation In order to evaluate the groundwater flow properties at the site, water-level elevation measurements were made at the permanent monitoring wells, piezometers, drive points, and the surface water in the drainage canal to determine the direction of flow. Hydraulic conductivity (slug) tests were also performed at selected wells to evaluate hydraulic properties of the surficial aquifer.

Water-level elevations were calculated by surveying each measuring point and referencing them to a permanent elevation datum. For the monitoring wells and drive points, the reference point was the top of the well casing. A staff gauge was installed in the drainage canal, and the top was used as a reference point

to measure the elevation of the surface water. Two rounds of water-level measurements were made during the investigation to compare changes in the elevation of the water table. Water-level elevations between individual wells at each cluster were made to determine the vertical hydraulic potential within the aquifer.

In situ slug tests were performed on selected monitoring wells to measure the hydraulic conductivity of the surficial aquifer. Slug tests were performed by placing a pressure transducer in the monitoring well to measure changes in water level during the test. A PVC slug was then swiftly lowered into the well to drive the water back into the aquifer, and the falling head phase was monitored. After allowing for equilibrium, the slug was removed swiftly to pull water back into the well and the rising head phase was monitored. The well was allowed to recover to within 90 percent of the static water level before the test was stopped. Data were processed in the Aqtesolv^M software program using the method of Bouwer and Rice (1976). For wells where the top of the screen was above the water table, the plot was analyzed using the double straight line method (Bouwer and Rice, 1989) to account for filter pack drainage.

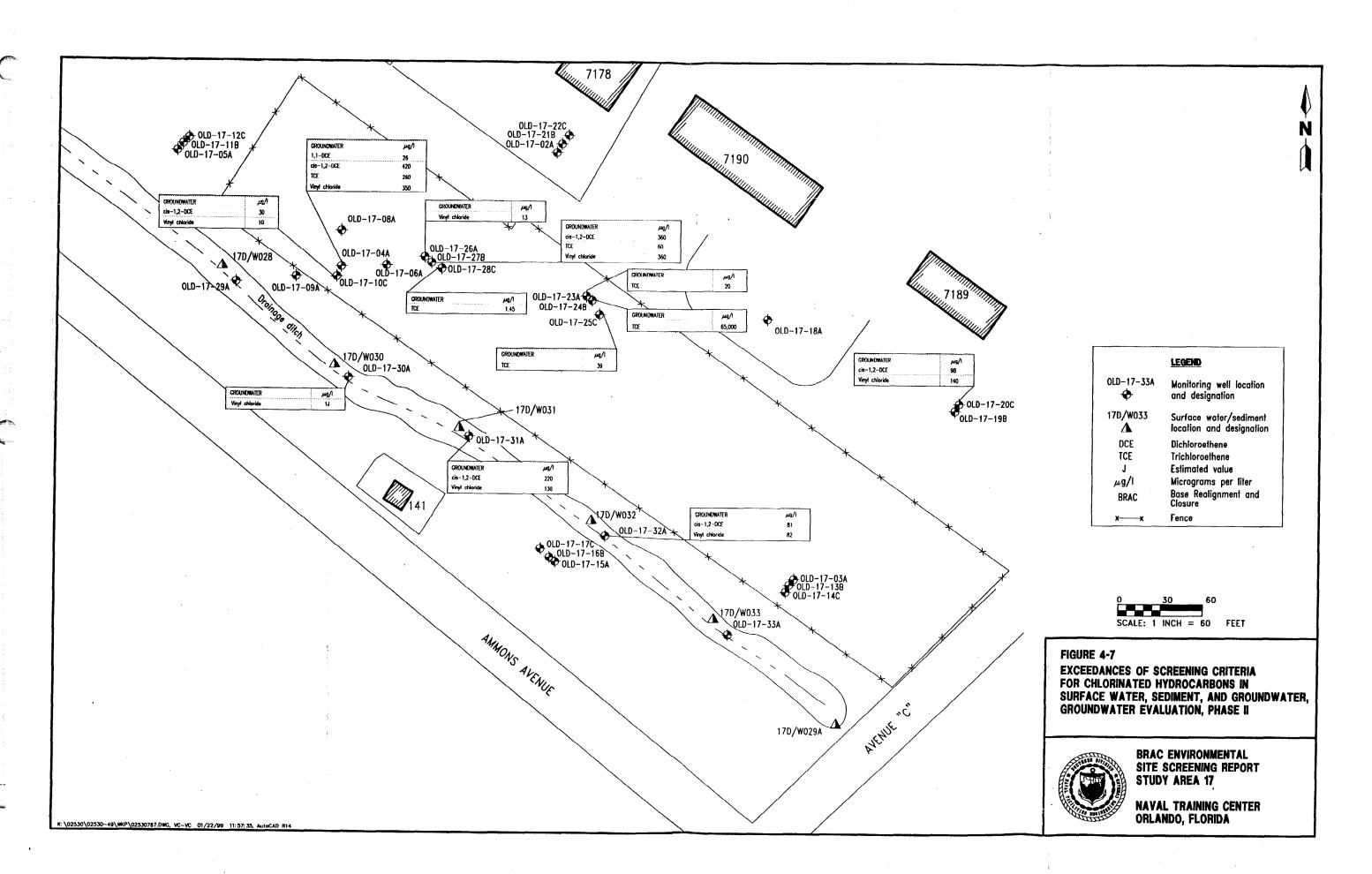
- 4.6 PHASE II CONFIRMATION RESULTS. The analytical results on samples collected from the various environmental media confirmed exceedances of chlorinated VOCs with the same general distribution as was demonstrated by the on-site analytical program.
- 4.6.1 Groundwater Analytical Results. Samples collected from 16 of the 28 monitoring wells and drive points had detections of one or more chlorinated VOCs. Detections at 12 of the 16 well locations are at concentrations that exceed screening criteria. A summary of the detections in groundwater collected from the monitoring wells and drive points is presented in Table B-3 of Appendix B. A complete summary of analytical results is presented in Table C-3 of Appendix C. Sampling locations are shown on Figure 4-7.

In the OLD-17-05A, OLD-17-11B, and OLD-17-12C cluster, only the sample collected from the shallow well (17G00502) had detections of chlorinated VOCs. The compound M-dichlorobenzene was detected at a concentration of 0.67 μ g/ ℓ .

Samples collected from the three wells in the OLD-17-03A, OLD-17-13B, and OLD-17-14C cluster had no detections. Of the samples collected from the OLD-17-18A, OLD-17-19B, and OLD-17-20C cluster, only the sample from OLD-17-20C had detections, which included the following compounds: 1,1-dichloroethane at 3.4 $\mu g/l$; 1,1-DCE at 1 $\mu g/l$; cis-1,2-DCE at 98 $\mu g/l$; trans-1,2-DCE at 0.76 $\mu g/l$; and vinyl chloride at 140 $\mu g/l$. Only the concentration of cis-1,2-DCE and vinyl chloride exceed screening criteria, including the GCTLs and Federal MCLs.

Samples collected from the three wells in the OLD-17-15A, OLD-17-16B, and OLD-17-17C cluster had no detections. Of the samples collected from the three wells in the OLD-17-02A, OLD-17-21B, and OLD-17-22C cluster, only the sample from the deep well (17G02201) had detections: chloromethane at 1.6 μ g/ ℓ and cis-1,2-DCE at 1.7 μ g/ ℓ . Neither concentration exceeds regulatory screening criteria.

Samples collected from the three wells in the western source area (OLD-17-26A, OLD-17-27B, and OLD-17-28C) had detections. The sample from the shallow well (17G02601) had the following detections: cis-1,2-DCE at 1.9 $\mu g/\ell$ and vinyl



chloride at 13 μ g/ ℓ (only vinyl chloride exceeds regulatory criteria). The sample from the intermediate well (17G02701) had the following detections: 1,1-DCE at 6.1 μ g/ ℓ ; cis-1,2-DCE at 360 μ g/ ℓ ; toluene at 1.8 μ g/ ℓ ; trans-1,2-DCE at 12; TCE at 60 μ g/ ℓ ; and vinyl chloride at 360 μ g/ ℓ (cis-1,2-DCE, TCE, and vinyl chloride concentrations exceed regulatory criteria). The sample from the deep well (17G02801) had the following detections: cis-1,2-DCE at 2.3 μ g/ ℓ and TCE 1.4 μ g/ ℓ . These concentrations do not exceed screening criteria.

Samples collected from the three wells in the cluster placed at the eastern source area (OLD-17-23A, OLD-17-24B, and OLD-17-25C) had detections. The sample from the shallow well (17G02301) had the following detections: cis-1,2-DCE at 9.9 $\mu g/\ell$ and TCE at 20 $\mu g/\ell$ (only TCE exceeds regulatory criteria). The only detection in the sample collected from the intermediate well was TCE at 65,000 $\mu g/\ell$. (The GCTL for TCE is 3 $\mu g/\ell$.) The sample from the deep well (17G02501) had the following detections: cis-1,2-DCE at 1.9 $\mu g/\ell$ and vinyl chloride at 13 $\mu g/\ell$. The concentration of vinyl chloride is the only compound that exceeds screening criteria.

Samples were also collected from monitoring wells OLD-17-04A and OLD-17-10C. Both samples had detections of more than one chlorinated VOC. The sample from the shallow well (17G04004) had the following detections: 1,1-DCE at 26 $\mu g/l$; cis-1,2-DCE at 420 $\mu g/l$; trans-1,2-DCE at 4.1 $\mu g/l$; TCE at 260 $\mu g/l$; and vinyl chloride at 350 $\mu g/l$ (the concentration of every compound but trans-1,2-DCE exceeds regulatory criteria). The sample from the deep well (17G01003) had the following detections: cis-1,2-DCE at 30 $\mu g/l$; TCE at 6.9 $\mu g/l$; and vinyl chloride at 10 $\mu g/l$. The concentration of TCE and vinyl chloride exceed screening criteria.

Where comparative data exists, the analytical results from samples collected with DPT compare favorably with the analytical data from monitoring wells. There are 12 samples from which one may draw a direct comparison (i.e., samples which were obtained from a similar depth interval). Five of the 12 sample pairs reported nondetections. At the other seven locations, the on-site results are consistent with regards to detecting the type of compound present and the concentration. In general, the on-site concentrations are larger by a factor of two to three times. This is a typical result when one compares analytical results from DPT and monitoring wells: monitoring well sampling requires a higher volume of water from the sampling interval and may provide a more dilute concentration. DPT versus monitoring well concentrations are summarized in Table 4-2 and described below.

Groundwater samples collected from four of the five drive points had detections of chlorinated VOCs, with the concentrations at three of the four exceeding regulatory criteria. The only detection at drive point OLD-17-29A was TCE at 2.5 $\mu g/\ell$. At drive point OLD-17-30A, the only chlorinated compounds detected were cis-1,2-DCE at 1.1 $\mu g/\ell$ and vinyl chloride at 1 $\mu g/\ell$. (The concentration of vinyl chloride equals the GCTL.) The compounds detected at OLD-17-31A were cis-1,2-DCE at 220 $\mu g/\ell$; toluene at 1 $\mu g/\ell$; trans-1,2-DCE at 2.2 $\mu g/\ell$; and vinyl chloride at 130 $\mu g/\ell$ (cis-1,2-DCE and vinyl chloride exceed regulatory criteria). At OLD-17-32A, cis-1,2-DCE was detected at a concentration of 81 $\mu g/\ell$, trans-1,2-DCE was detected at 1.9 $\mu g/\ell$, and vinyl chloride was detected at 82 $\mu g/\ell$. The concentration of cis-1,2-DCE and vinyl chloride exceed screening criteria.

Table 4-2

Comparison of Groundwater Analytical Results, Monitoring Well (Off-Site CLP Laboratory) versus DPT (with On-Site Field Laboratory Analysis)

Base Realignment and Closure Environmental Site Screening Report Study Area 17 **Naval Training Center** Orlando, Florida

		Chando			
Monitoring Well ID	Screened Interval (feet bis)	VOC Concentration (μg/t) (CLP Laboratory)	Nearest DPT Screening Point ¹	DPT Sampling Interval ² (feet bis)	VOC Concentration (μg/t) (Field Laboratory)
OLD-17-03A	2 to 12	<2	17Q02502	9 to 10	< 0.5
OLD-17-04A	2 to 12	1,1-DCE @ 8.6 cis-1,2-DCE @ 420 TCE @ 260 VC @ 350	17 Q0 0102	. 10 to 14	1,1-DCE @ 82 cis-1,2-DCE @ 1,500 TCE @ 950 VC @ 620
OLD-17-13B	15 to 20	<2	17Q02502	19 to 20	< 0.5
OLD-17-14C	43 to 48	<2	17Q02505	49 to 50	< 0.5
OLD-17-15A	2 to 12	<2	17Q01902	10 to 14	<0.5
OLD-17-16B	15 to 20	<2	17Q01904	20 to 24	< 0.5
OLD-17-23A	2 to 12	cis-1,2-DCE @ 8.8 TCE @ 20	17Q01702	10 to 14	cis-1,2-DCE @ 24 TCE @ 140
OLD-17-24B	20 to 25	TCE @ 65,000	17Q01704	20 to 24	1,1-DCE @ >1,000 cis-1,2-DCE @ >1,000 TCE @ >84,000 VC @ >1,000
OLD-17-25C	58 to 63	cis-1,2-DCE @ 0.78 PCE @ 0.49 TCE @ 39	17Q01708	59 to 60	cis-1,2-DCE @ 2.2 PCE @ 1.3 TCE @ 59
OLD-17-26A	2 to 12	cis-1,2-DCE @ 1.9 VC @ 13	17Q00301	5 to 9	1,1-DCE @ 4.1 cis-1,2-DCE @ 33 TCE @ 25 VC @ 98
OLD-17-27B	15 to 20	1,1-DCE @ 6.1 cis-1,2-DCE @ 360 trans-1,2-DCE @ 12 TCE @ 60 VC @ 360	17Q00303	15 to 19	1,1-DCE @ 58 cis-1,2-DCE @ 3,200 trans-1,2-DCE @ 80 PCE @ 80 TCE @ 5.5 VC @ 1,400
OLD-17-28C	58 to 63	cis-1,2-DCE @ 2.3 TCE @ 1.4	17Q00308	59 to 60	cis-1,2-DCE @ 8.9 TCE @ 3.6 VC @ 9.7

¹ Monitoring well clusters were installed within 5 feet of the screening point.

Notes: CLP = Contract Laboratory Program.

< = less than.

DPT = direct-push technology.

@ = at.

ID = identifier.

DCE = dichloroethene.

bls = below land surface.

TCE = trichloroethene.

VOC = volatile organic compound.

VC = vinyl chloride.

 $\mu g/\ell = micrograms per liter.$

PCE = tetrachloroethene.

² DPT sampling interval shown is that interval which best corresponds to the screened interval of the cited monitoring well. In each instance the DPT sampling interval is located within the screen's depth interval.

4.6.2 Surface Water and Sediment Analytical Results.

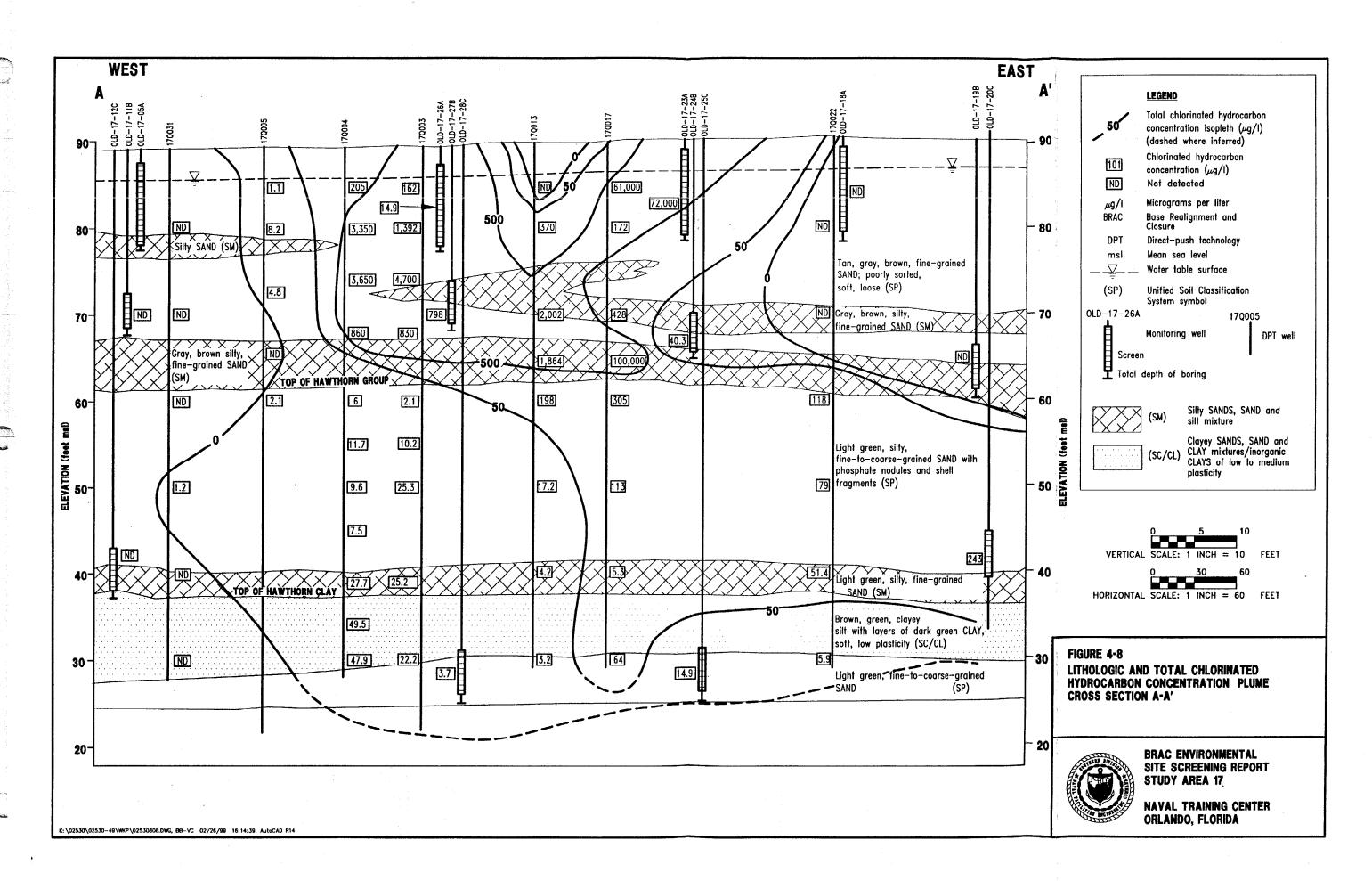
- 4.6.2.1 Surface Water Four of the five surface water samples had detections of toluene, and two of the five had detections of either TCE or vinyl chloride. Sample 17W03001 had detections of toluene at 5.2 $\mu g/\ell$ and TCE at 1.2 $\mu g/\ell$. Sample 17W03101 had detections of toluene at 20 $\mu g/\ell$ and TCE at $\mu g/\ell$. Samples 17W03201, 17W03301, and 17W03401 all had detections of toluene only at concentrations of 17 $\mu g/\ell$, 18 $\mu g/\ell$, and 25 $\mu g/\ell$, respectively (Figure 4-8). None of the compounds were detected at concentrations exceeding surface water standards.
- 4.6.2.2 Sediment Three of the five sediment samples had detections of toluene and one had a detection of vinyl chloride. Sample 17D03001 had a detection of methylene chloride at a concentration of 4.4 $\mu g/kg$. Sample 17D03101 had detections of methylene chloride (4.8 $\mu g/kg$) and vinyl chloride (0.72 $\mu g/kg$). Sample 17D03201 had a detection of methylene chloride (5.1 $\mu g/kg$). Sample 17D03301 had detections of methylene chloride (6 $\mu g/kg$) and toluene (1 $\mu g/kg$). Sample 17D03401 had detections of methylene chloride (3.6 $\mu g/kg$) and toluene (0.51 $\mu g/kg$). As with the surface water, none of compounds were present at a concentration exceeding sediment screening criteria.

A summary of the detections in surface water and sediment is presented in Tables B-4 and B-5, respectively, of Appendix B. A summary of the complete surface water and sediment analytical results is presented in Tables C-4 and C-5, respectively, of Appendix C.

4.6.3 Plume Geometry. The analytical results from the confirmation sampling effort support the general geometry of the plume as determined by the field screening results presented in Subsection 4.4.2, and as depicted on Figures 4-4, 4-5, and 4-6. In the shallow and intermediate parts of the surficial aquifer, the plume extends approximately 150 to 250 feet east-southeast from the source areas. The plume extends approximately 50 to 75 feet west and approximately 100 to 150 north from the source areas at these depth intervals. The plume affects a larger part of the area in the deepest part of the aquifer. At that interval the plume extends approximately 250 to 300 feet east-southeastward, approximately 50 to 75 feet to the west, and approximately 150 to 200 feet from the source areas. The plume has migrated through the surficial aquifer and the shallowest clay of the Hawthorn Group to a depth of at least 63 feet bls in both source areas.

The analytical results of the drainage canal samples (surface water, sediment, and groundwater) indicate that the plume has migrated downgradient and is discharging to the canal. The VOC concentrations in the sediment and surface water are much lower than in the groundwater collected from the drive points, suggesting that the VOCs are volatilizing and being diluted upon entering the drainage canal. All of the groundwater samples collected from the monitoring wells south of the drainage canal had no detections of any VOCs, suggesting that the plume extends no farther south than the drainage canal.

The lithologic and analytical data gathered during the screening and confirmation programs were used to generate two cross-section profiles through the study area.



Cross section A-A' (Figure 4-8) was constructed from west to east through the long axis of the plume and includes both of the suspected source areas. Cross section B-B' (Figure 4-9) was constructed from north to south through the eastern source area and includes the drainage canal.

The highest VOC concentrations occur along the upper surfaces of the shallow silty sand layers in both source areas. These layers are finer-grained than the surrounding material in the aquifer and act as an aquitard, thus inhibiting downward groundwater flow and the migration of contaminants. VOC concentrations above and between the two silty sand layers are as much as three orders of magnitude higher than those immediately below the two layers, where the total VOC concentrations are generally less than $50~\mu g/\ell$.

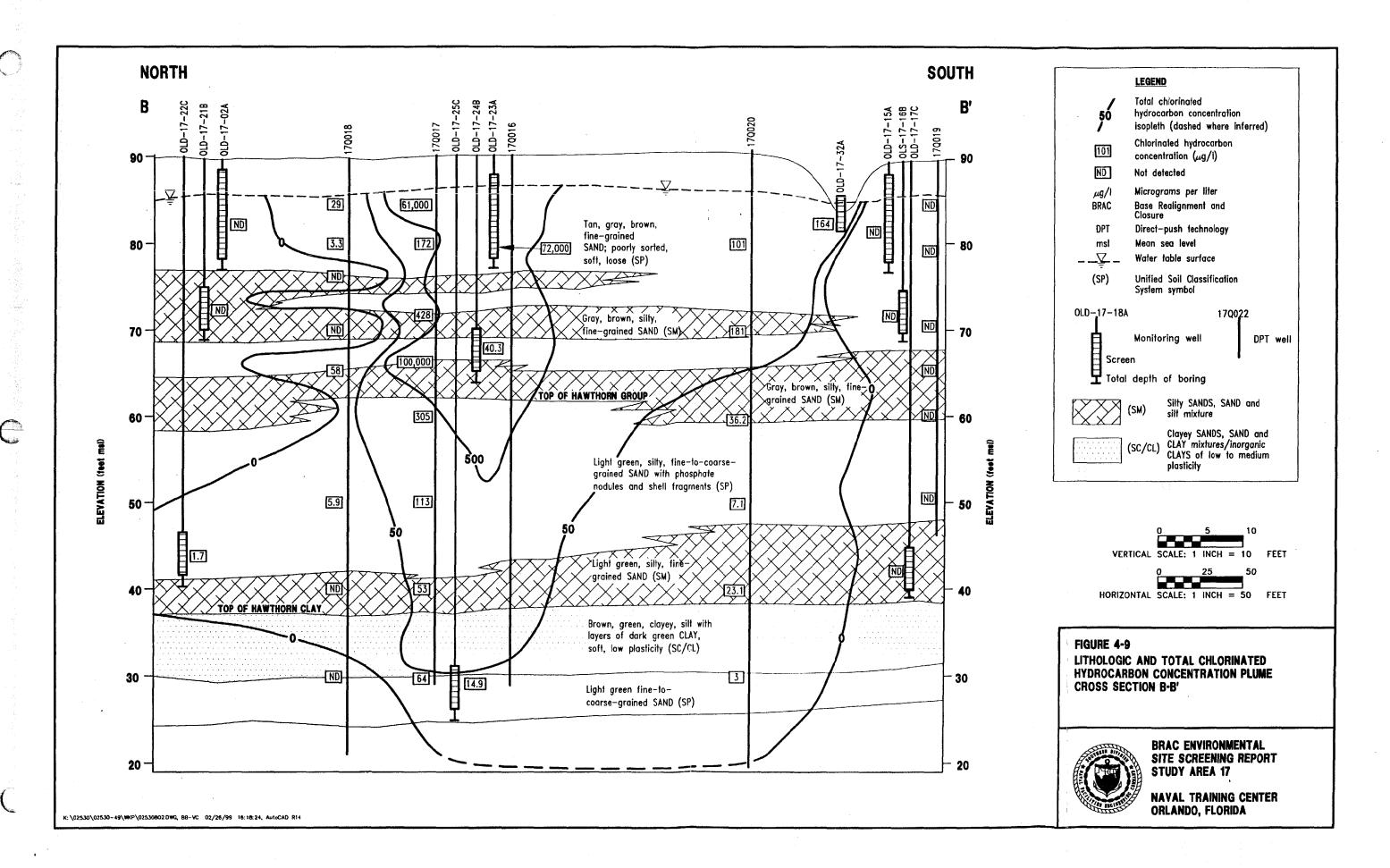
The upper surface of the shallowest clay in the Hawthorn Group at the base of the surficial aquifer represents another area where contaminants have accumulated. The total VOC concentration at that depth in the two source areas ranged from 50 to 100 $\mu g/\ell$. Immediately below the clay layer the total concentration decreased to less than 50 $\mu g/\ell$.

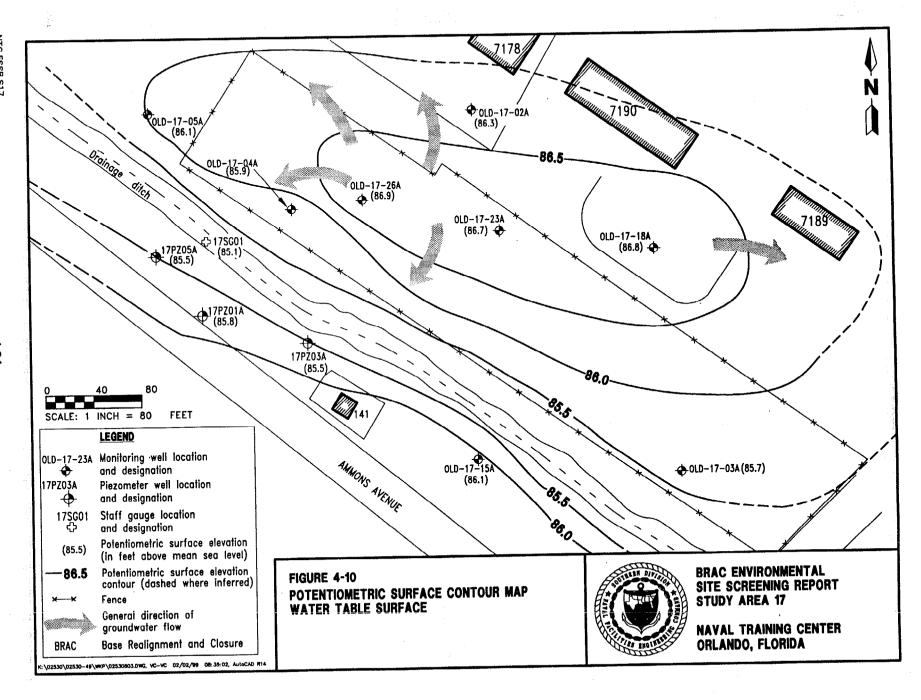
4.6.4 Groundwater Flow and Plume Migration Water-level elevation data collected from the network of monitoring wells, piezometers, drive points, and the staff gauge are presented in Table I-l of Appendix I. Two rounds of measurements were made, one in July and the other in August 1998. The water-level elevation data during the July event was used to construct the potentiometric surface maps of the shallow (water table), intermediate, and deep parts of the surficial aquifer, as depicted on Figures 4-10, 4-11 and 4-12, respectively.

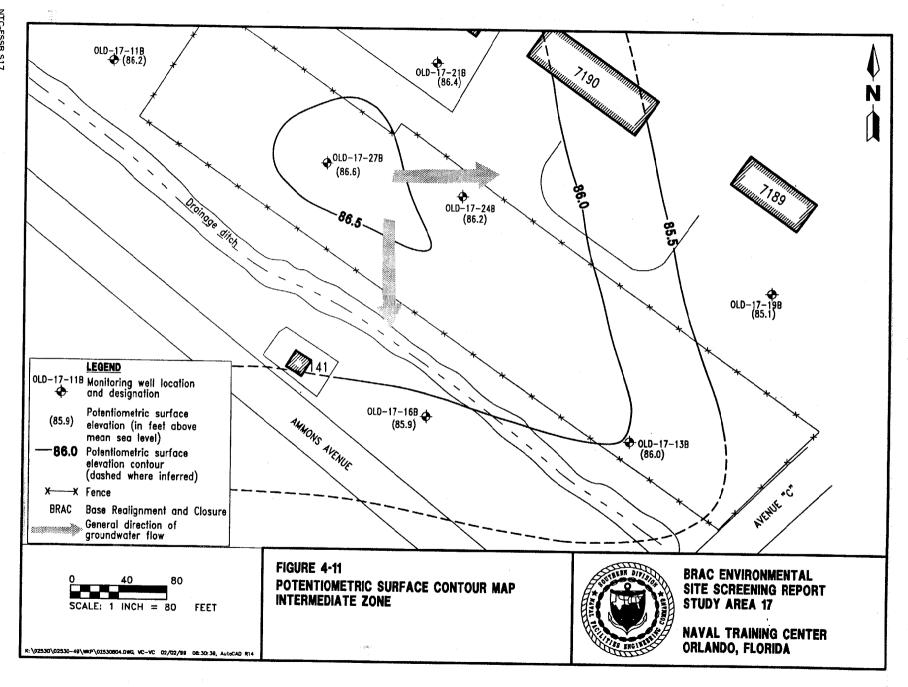
The water table at SA 17 generally conforms to the topographic surface, and, during the field investigation, was approximately 3 feet bls beneath the site. The results of the initial round (July 1998) of water-level measurements indicate mounding of the potentiometric surface in the central part of the site, generally extending from monitoring well OLD-17-26A to OLD-17-18A. The mounding was less pronounced during the second round (August 1998) of water-level measurements. The reduction in the mounding may be attributed to the fact that a leaking potable water pipeline was repaired in the time interval between the two rounds of water levels.

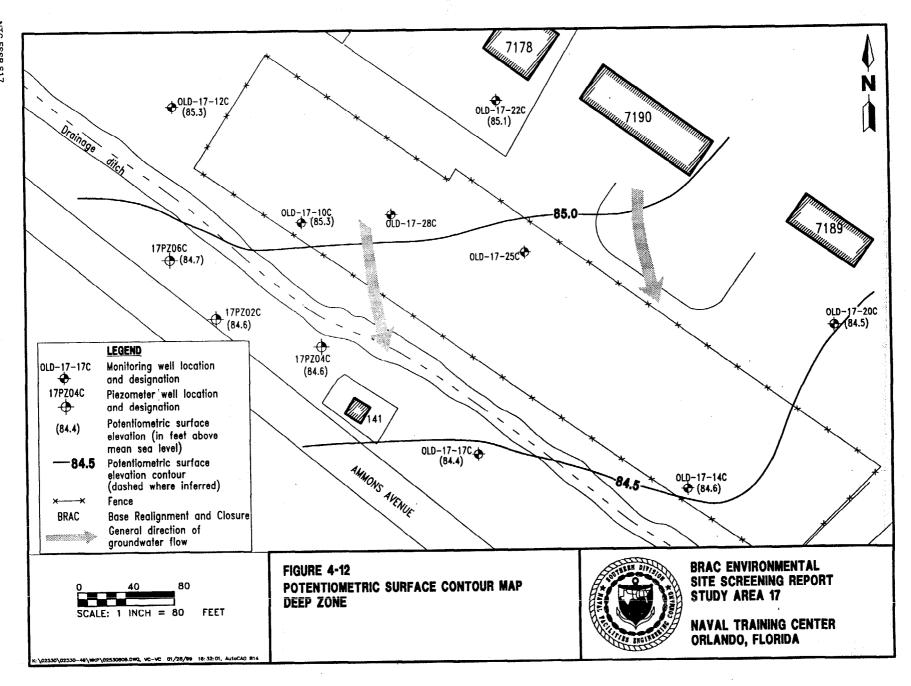
The groundwater in the shallow part of the aquifer flows laterally outward in a radial pattern from the mound area with the steeper gradient is to the south and southeast. The average horizontal gradient in the shallow zone is 0.004 feet/foot (ft/ft). In the intermediate portion of the aquifer, the lateral groundwater flow pattern is along a ridge extending between well OLD-17-26A and OLD-17-03A. Flow is to the east-southeast away from the ridge. The average gradient in the intermediate zone is 0.003 ft/ft. In the deepest part of the aquifer the lateral flow pattern is eastward with a gradient of 0.002 ft/ft.

The hydraulic potential survey was performed by comparing the water-level elevation between the wells in each cluster. This analysis also included a comparison of the water-level elevations in the five drive points to that of the surface water in the drainage canal in order to assess the nature of hydraulic interaction. Vertical gradients were calculated based on these hydraulic potential differences and screen (mid-point) intervals. The monitoring well construction details are presented in Table I-2 of Appendix I. The survey results are presented in Table I-3 of Appendix I.









There appears to be a relatively strong downward component to groundwater flow across the entire site except for the areas adjacent to the drainage canal, where groundwater in the upper part of the aquifer discharges to the canal. The vertical gradient measures in the range of 0.007 ft/ft to 0.020 ft/ft in the upper part of the aquifer (Figure 4-13). In the drainage canal and the immediate vicinity of the canal, however, the gradient is upward (approximately 0.25 ft/ft). The hydraulic potential throughout the lower part of the aquifer is downward (Figure 4-14), and ranges from 0.03 ft/ft to 0.05 ft/ft.

The survey results indicate that groundwater flow potential in the shallow part of the surficial aquifer is downward in both source areas, and that some lateral radial flow also occurs. The downward potential exists everywhere except the immediate vicinity of the drainage canal. However, downward flow cannot be confirmed without vertical conductivity data. In the area of the canal, groundwater in the shallow, and possibly the intermediate, part of the upper aquifer flows upward and discharges to the canal. Potential flow throughout the deeper part of the aquifer is downward. Consequently, plume migration is influenced by the lithology and the groundwater flow pattern in the area. The plume has migrated downward from the source areas and along the upper surfaces of the silty sand layers before discharging to the drainage canal.

The hydraulic conductivity values were combined with the average horizontal gradient determined for the various depth intervals of the aquifer to determine groundwater flow velocities. The groundwater flow rate calculations are based on the following equation (Fetter, 1980):

$$V = Ki/p \tag{1}$$

where: V = groundwater flow velocity (ft/day),

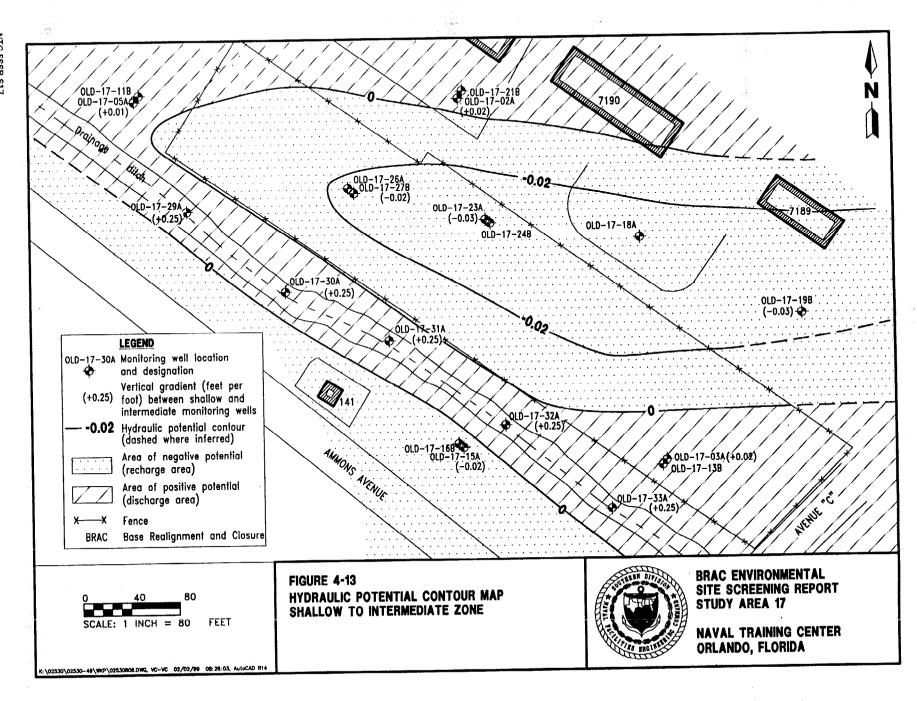
K = hydraulic conductivity (ft/day),

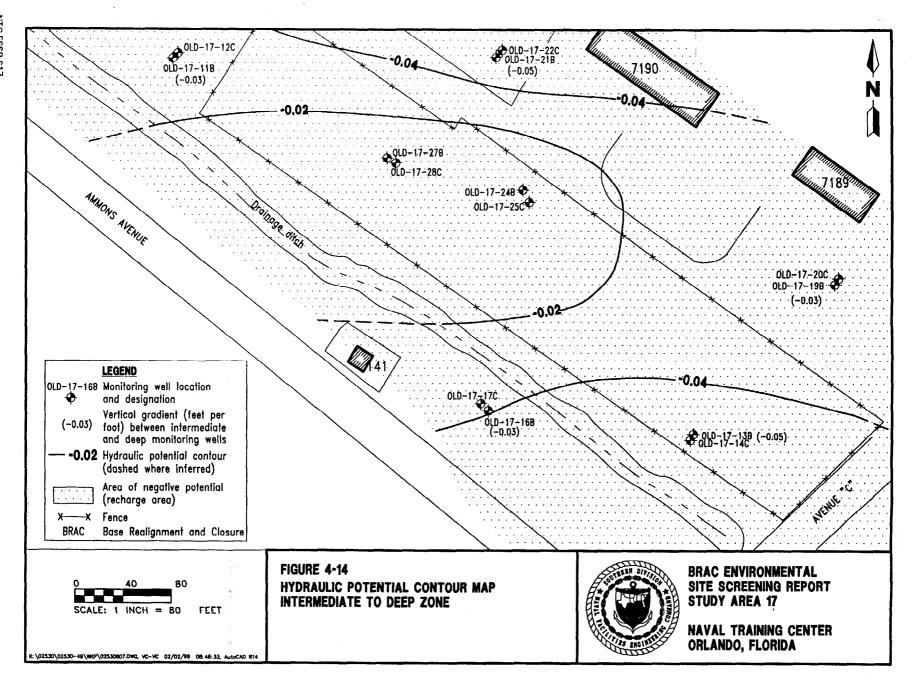
i = hydraulic gradient (ft/ft), and

p = effective porosity (unitless, assumed at 0.30 for sand aquifers

The mean hydraulic conductivity value for the shallow wells was 1.1×10^{-3} feet per minute (ft/min), or 1.5 feet per day (ft/day). The mean conductivity value for the intermediate wells was 3.0×1^{-4} ft/min, or 0.5 ft/day. The mean conductivity value for the deep wells was 1.0×10^{-3} ft/min, or 2.5 ft/day. Although the hydraulic conductivity values were somewhat higher in the shallow and deep intervals, all of the values fall within a relatively narrow range, indicating that the coarser-grained section of the surficial aquifer in the site is relatively homogeneous. This translated into a mean groundwater flow rate of 7.3 ft per year (ft/yr) for the upper part of the surficial aquifer in the SA; a mean rate of 1.8 ft/yr for the intermediate unit of the aquifer; and a mean rate of 6.1 ft/yr for the deep part of the aquifer.

Assuming that contaminant migration is predominantly driven by advective transport, estimates of groundwater flow velocity may be used to conservatively assess plume movement. As previously stated, groundwater flow velocities range between approximately 2 to 7 feet per year; therefore, the contaminants of concern may also be migrating at similar rates and in similar direction(s). The extent of the plume, both in size and shape, appears to support use of the advective transport assumption. These relatively low velocities represent





conditions where monitored natural attenuation (MNA) may be a viable remedial solution.

As shown on the cross sections (Figures 4-8 And 4-9), it also appears that contaminants are migrating downward through the surficial aquifer. This condition is likely due to the relatively strong downward potential observed in much of the study area. However, little information relative to vertical hydraulic conductivity properties of the alluvial materials is available at this time. Assessments of these properties were not included in the scope of this site screening investigation. Further characterization of these parameters is critical to fully understanding groundwater flow conditions at this site. Due to anisotropy inherent in alluvial systems, vertical hydraulic conductivity values are typically an order of magnitude less conductive to flow than horizontal conductivity values. Furthermore, it is not unusual for vertical conductivity values to be two or more orders of magnitude lower than horizontal values. Further assessment of these conditions will support evaluation of both groundwater flow and contaminant movement within the surficial aquifer.

The test results are presented in Table I-4 of Appendix I. Slug-test semi-log plots are presented in Appendix J.

5.0 STUDY AREA 17, CONCLUSIONS AND RECOMMENDATIONS

- <u>5.1 CONCLUSIONS</u>. The various environmental media at SA 17 have been adversely affected by previous activities at the site. A summary of the findings of this investigation by medium is presented below. A summary of HLA's recommendations for the site are presented in Section 5.2.
- <u>5.1.1 Soil</u> Both the surface and subsurface soil have been contaminated with PAH compounds at concentrations that exceed screening criteria. Contaminated surface soil that exceeds screening criteria is concentrated in the former motor pool compound. Subsurface soil with PAH concentrations exceeding screening criteria was detected at only two locations, and industrial screening criteria were only exceeded at one of these locations. The surface soil has higher concentrations of contaminants than the subsurface soil.
- 5.1.2 Groundwater Chlorinated VOCs have adversely affected the groundwater throughout the surficial aquifer and the upper part of the intermediate aquifer of the Hawthorn Group sediments in isolated areas in the area of the former motor pool compound. Given the contaminant distribution pattern, the plume appears to have originated from two release points at the surface located in the western and central parts of the former motor pool area. The highest contaminant concentrations were detected along the water table in the source areas and along the upper surface of a silty sand layer that is located between 15 and 25 feet bls. In the western source area, the compounds detected at the highest concentrations were cis-1,2-DCE and vinyl chloride at concentrations of up to $400~\mu g/l$. In the eastern source area, TCE was the predominant compound detected, with concentrations of up to $65,000~\mu g/l$.

The plume configuration has an estimated volume of approximately 1,000,000 cubic feet. The plume extends along the water table from both source areas for a distance of approximately 50 to 100 feet in the direction of groundwater flow (east-southeast). In the intermediate unit of the surficial aquifer, the plume extends a distance of 200 to 250 feet downgradient, and in the deep unit of the aquifer, the plume extends approximately 250 to 300 feet from the source areas. The plume has also migrated downward through the shallowest clay in the Hawthorn Group to a depth of at least 65 feet bls within the intermediate aquifer. The highest total VOC concentration detected at that depth interval was approximately 40 $\mu g/\ell$.

In addition to the lithologic framework, plume migration has been affected by the natural groundwater flow pattern. Groundwater flows horizontally in the source areas in a radial pattern, with the steeper gradient southward toward the drainage canal. There is a strong downward component to groundwater flow potential throughout the surficial aquifer. The relatively flat horizontal gradient contributes to low flow rates throughout the surficial aquifer. The flow rates vary from approximately 2 ft/yr in the intermediate unit of the surficial aquifer to 6 and 7 ft/yr for the shallow and deep units of the aquifer, respectively.

5.1.3 Surface Water and Sediment. It does not appear that the plume has adversely affected the surface water or sediment in the drainage canal located along the south side of the site. Even though groundwater samples collected from drive points installed through the bottom of the canal had exceedances of

screening criteria for several compounds, neither the surface nor the sediment samples collected from the drainage canal had VOC detections that exceeded screening criteria.

5.1.4 Site Conceptual Model The results of the groundwater evaluation were used to develop a site conceptual model (SCM) for SA 17. The SCM provides a framework within which the source area, release mechanism(s), and environmental pathways of potential concern are identified. The SCM is based upon our current understanding of the various environmental media and pathways. The model may also serve as a framework for conceptualizing application of future remedial technologies and focusing activities toward an appropriate solution.

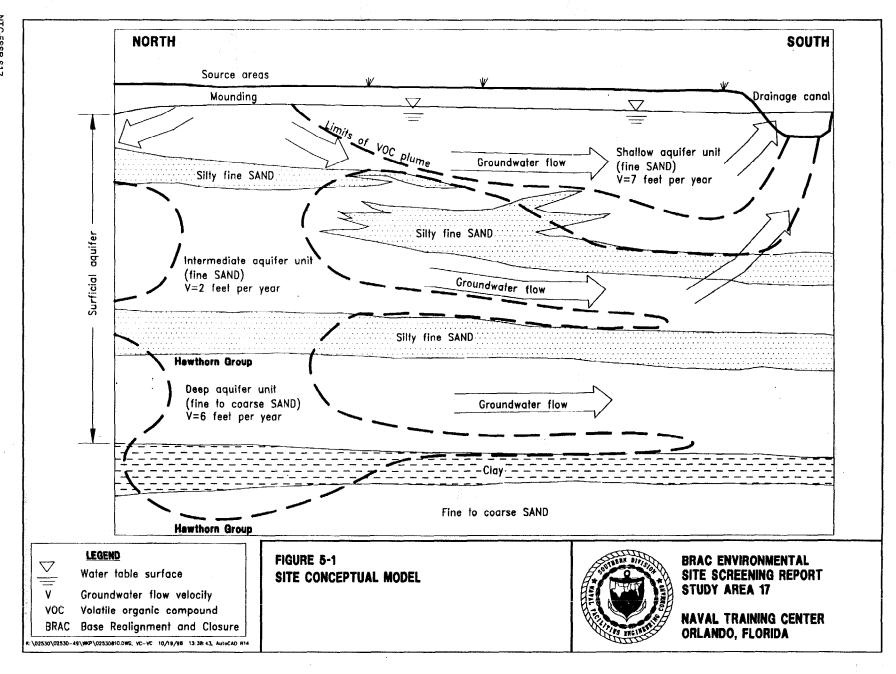
The source area is defined as the area where the release(s) of contaminants is suspected to have occurred. A contaminant release mechanism is a process that results in migration of a contaminant from a source area into the immediate environment, such as spills and/or leaks from a storage container. Once in the environment, contaminants are potentially transferred between media and transported away from the source and/or site.

A graphical SCM developed for SA 17 is depicted on Figure 5-1. The source area is suspected to have originated at the surface in at least two areas located in the east and north-central parts of the former motor pool compound. contaminant source release(s) mechanism is suspected to be occasional, periodic, low-volume surface spills. The potential release transport mechanism for contaminant migration is seepage into the subsurface through the soil and into The contaminants have migrated both horizontally in the the groundwater. surficial aquifer, in the direction of groundwater flow, and vertically to the base of the surficial aquifer. Downward migration has been inhibited by two layers of relatively less permeable silty sand within the aquifer and the shallowest clay layer of the Hawthorn Group sediments that marks the base of the aquifer. The silty sand layers act as aquitards within the surficial aquifer. The contaminant plume divides upon encountering these aquitards, with part of the plume migrating along the upper surface in the predominant direction of groundwater flow; the remainder of the plume migrates through the aquitard.

The highest VOC concentrations occur along the upper surface of the shallowest aquitard at a depth interval of 15 to 25 feet bls. The contaminants are migrating with groundwater that discharges into the drainage canal bordering the site. This migration pattern follows the natural groundwater flow pathway in the upper part of the aquifer.

The only apparent potential exposure pathways of the chlorinated solvents are through ingestion and/or inhalation via media associated with the drainage canal. The VOC concentrations in surface water and sediments associated with the canal are currently relatively low, but the natural groundwater flow patterns continue to transport contaminants with high concentrations of contaminants in the direction of the canal.

5.2 RECOMMENDATIONS. Because of the nature and extent of PAHs in soil, and the concentrations of chlorinated VOCs in groundwater and the drainage canal, HLA recommends a reclassification of SA 17 from 7/Gray to 6/Red. HLA also recommends



that additional assessment and limited remedial activities be implemented. The specific recommendations are listed in the subsections below.

5.2.1 Soil. Because the PAH contamination is distributed in relatively small, isolated patches across the site, HLA recommends that an Interim Remedial Action (IRA) be developed and implemented. The IRA will involve excavation of the surface soil that exceeds industrial screening criteria for disposal off site. A work plan has been prepared that presents the proposed limits of excavation that would likely be required to remediate the site to industrial screening criteria (HLA, 1999). Although the results of the screening investigation permitted the general definition of the limits of PAH contamination, the IRA should include the collection of confirmatory surface soil samples for laboratory analysis to assure that contamination has been remediated to levels that are protective of human health and the environment for the intended reuse, which is industrial (HLA, 1999).

Although the contamination in the subsurface is less severe and of limited areal extent, HLA recommends that this material be addressed during the IRA and excavated along with the surface soil. This would eliminate the need for any deed restrictions in transfer documents.

5.2.2 Groundwater, Surface Water, and Sediment HLA recommends that a natural attenuation (NA) assessment be performed expeditiously to evaluate this approach as a potential remedial alternative for the VOC plume. The assessment should involve the collection of groundwater samples from selected monitoring wells for analysis of NA parameters, and should be conducted in accordance with USEPA Region 4 Standard Operating Procedures (USEPA, 1996). Evaluation of this data, combined with analysis of the hydraulic relationships between the aquifer units would provide an understanding of biodegradation rates, as well as contaminant fate and transport.

Regarding the immediate exposure concerns posed by the drainage canal, HLA recommends that a preliminary risk evaluation (PRE) be performed. The existing analytical database can be utilized for the PRE. The PRE should consist of the following components:

- · a hazard identification,
- an exposure assessment,
- · a toxicity assessment,
- · a risk characterization, and
- · an uncertainty assessment.

Preliminary MNA scoring and further evaluation, if scoring results are favorable, are recommended, and should be consistent with current USEPA protocol (USEPA, 1998). Evaluation of vertical hydraulic conductivity values and further assessment of vertical groundwater movement is also recommended to support fate and transport analysis. The results of the NA assessment and the PRE should be used to determine the need for a focused feasibility study (FFS). Further evaluation may determine that data gaps exist. If this is the case, it may be necessary at that time to install one or more additional monitoring wells to better define the depth and lateral extent of the VOC plume. However, at this time, HLA is not recommending the placement of any additional wells. If an FFS is required, then HLA recommends that a preliminary feasibility study pilot study be implemented, possibly involving bioenhancement through the application of hydrogen release compounds into strategic monitoring wells to accelerate natural degradation processes.

The undersigned members of the OPT concur with the findings and recommendations of the preceding investigation.

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U.S. Environmental Protection Agency, Region IV	Date
David Dable	4/22/99
Florida Department of Environmental Protection	Date
Warne & Hours	4-22-99
U.S. Department of the Navy	Date

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APPENDIX A

SOIL BORING LOGS, MONITORING WELL CONSTRUCTION DIAGRAMS, MONITORING WELL DEVELOPMENT FORMS, and GROUNDWATER SAMPLING FIELD DATA SHEETS

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		80%	0						8,9		
10-									4,7		
		90%	0						6,7		
_									5,7		
		90%	10	The state of the s	•				9,0		
-			-	ТО			<u> </u>				
15—				ם א כנ	E 1 of 0	I N17N4		1	ļ HI	A-ES	

PT0)80	t: BRAC NT	. vriando		She:	S.A. 17		Boris	ng No.: OLD-17-05	5A
Clent:	SOUTHDIV	IAVFACE	NGCOM				Job	No.: CT0-107	
Contra	actor: GEOTI	ΞK			Date started: 05.	(15/95		Compite: 05/15	/95
Metho	d: Hollow ste	m auger		Casing Size: 2 in.	Screen Int.: 10 ft		Prote	ction level: D	
Graun	d Elev.:			Type of OVM.: Porta FID	Total depth: 14Ft.		Dpth	to ♀ 4 Ft.	
Logge	d by: M. Ha	wes		Well Development Date:			Well I	D: OLD-17-05A	
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon Recovery	Headspace (ppim)	Soil/Rock Descript and comments	ion	Lithologic symbol	Soll class.	Blows/6−in.	
				QUARTZ SAND: Gray, silty, fine		17/3	SM	<u> </u>	
1			0	QUARTZ SAND: Tan, silty, fine, goo	od to moderate				
				rounding			1		
+						12/2			
						12/2			
4			0						
1	17800502							8,9	Æ
-	(4-6')								ΙĒ
5-		100%						11,13	ΙE
Tons.		1						ща	
								- 12	E
1			1	SAND: Interlayered lenses of coar				5,10	
				fine, brown to dark brown, fine, silt	y-clayey sand	1//			
4		100%	0					12,14	
			.						
4	-		1					6, 8	
	•						İ		
-		75%	0		•			01,8	
									=
10—								5,7	
į								0, ,	
		100%	0				l	5.10	
1		100%		SAND: Interlayered lenses of coar	se, white sand and			01,8	
				tine, brown, silty-clayey sand					目
4			1	•			•	4,8	
4		100%	5					5,7	
-		<u> </u>	4	TO		[2./2]			· . · .
ŀ				TO			ŀ		
15—									
				PAGE 1 of OL	D1705				A-ES

oject: BRAC NTC Orlando	Site:	S.A. 17		Boring No.: OLD-17-08A				
ent: SOUTHDIVNAVFACENGCOM				Job No.: CTO-107				
ntractor: ABB-ES		Date started: 01/23/	97	Compitd: 01/23/97				
thod: Terra Probe	Casing Size: 0.5 in.	Screen Int.: 9 ft.		Protection level: 0				
ound Elev:	Type of OVN.:	Total depth: IIFt.		Dpth to ♀ Ft.				
gged by:	Well Development Date:			Well 10: OLD-17-08A				
Samble ID Spart (Debty) A Spart (Peads space (Ppm))	Soll/Rock Descrip and comments	tion 3	symbol	SB Blows/6-in.				
	2-in. ID microwell was installed	using TerraProbe.						

Projec	t: BRAC NT	C Orl	ando			Site: S.A. 17			Borin	g Na.: OLD-17-07/	1
	SOUTHOIV	Filosopie sc	ACEN	IGCOM	an angkalan di kapangalangan di kapangan anggan panggan kapan anggan di				Jab N	0.: CTO−107	
	octor: ABB-				<u> </u>	Date :	started: 01/	23/97		Compitd: 01/23/	97
	d: Terra Pro	pe			Casing Size: 0.5 in.		n Int.: 9 ft.		Protec	tion level: 🛛	
	i Elev.:				Type of OVN.:	Total	depth: IIFt.	· · · · · · · · · · · · · · · · · · ·		o ♀ Ft.	
rogge	a by:				Well Development Date:		• • • • • • • • • • • • • • • • • • •		Mel II	: OLD-17-07A	· · · · · · · · · · · · · · · · · · ·
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		nents		Lithologic symbol	Soil class.	Blows/6-in.	
5					I/2-in. ID microwell was insta		rarrobe.				
10—											
					TD * · · · · · · · · · · · · · · · · · ·						

= 5 > 8 ± 5 × 5 × 5 × 5 × 5 × 5 × 5 × 5 × 5 × 5	Project: BRAC NT	C Orlando			Site: S	.A. 17		Bori	ng No.: OLD-17-0	8A			
Contractor: ABB-ES Ceaning Size: 0.5 in. Screen Dat. 2 ft. Protection Invest: 0 Enrund Elev- Type of OVA: Total depth: IIF. Opt to \$7 Ft. Congod by: Well Development Date: Well Development Date: Well Development Date: Well Development Date: Books of the Screen Classification	Clent: SOUTHDIV	NAVFACEN	GCOM		(\$4.5 × 5)		A 1 .	Jab	Na.: CTO-107	Control of the Contro			
Nethod: Terra Probe Cashg Size: 0.5 in. Sorsen Int.: 9 ft. Type of OVN: Net Development Dete: Sancie: ID Solv Section ievet: 0 Solv Rock Description and consents: (Capth) Solv Section ievet: 0 Solv Rock Description and consents: 0 Solv Rock Description and consents				1.00	a i manada e e e	Date started: 01/23/97			Compitd: 01/23/97				
Sample ID Sample ID Solution Solutio	Method: Terra Pro	ppe		Casing Size: 0.5 in.		Screen Int. 9 ft.		Protection level: D					
New Development Dates: New Development Dat				Type at OVM.:		Total depth: IIFt.		Opth	ta ¥ Ft.				
S— 10— TD	Logged by:			Well Development Dat	:e:			Well 1	D: OLD-17-08A	contracted on the contraction of the contracted on the contracted			
S—————————————————————————————————————	京군 (Depth)	Split Spoon Recovery	Headspace (ppm)			on	Lithologic symbol	Soll dass.	Blows/6−in.				
			1/2		nstalled u	sing TerraProbe.							
cie i trata de la companya della companya della companya de la companya della com													

				Site: S			 	g No.: OLD-17-09	A
Client: SOUTHDIV		NGCOM				<u> </u>	Job N	lo.: CTO-107	
Contractor: ABB-			0-t00		Date started: 01/		T =	Compltd: 01/23	/97
lethod: Terra Pro	ope		Casing Size: 0.5 in.		Screen Int.: 9 ft.		 	tion level: D	
Ground Elev.: .agged by:			Type of OVM.: Well Development Da		Total depth: IIFt.			to ♀ Ft.	
.ogged by.	<i></i>	<u> </u>	wer nevelopment ne	(8,			MSI TT): OLD-17-08A	
Sample ID (Depth) (Type)	Split Spoon Recovery	Headspace (ppm)		Description	no	Lithologic symbol	Soll dass.	Blows∕6in.	
5				nstalled us	sing TerraProbe.				

 $\frac{1}{2}\left(\frac{1}{2}\right)^{2}$, where $\frac{1}{2}$ is a figure of $\frac{1}{2}$ and $\frac{1}{2}$ is a first set of $\frac{1}{2}$

Section South Circle Section	pject: BRAC NTC Orlando		Site: S.A. 17	Boring	oring No.: OLD-17-10C		
County C	ent SOUTHDIVNAVFACENG	GCOM	e en record de la companya de la com	Jab N	o.: CTO 107		
Series Desire Cesting Size: 2 in. Series Dit. 5 ft. Protection level: 0	the second secon		Date started: 02	/04/97	Compitd: 02/04/97		
Type of OVN.: FID Total depth: 80Ft. Opth to 3 0 Ft.		Casing Size: 2 in.	Screen Int.: 5 ft.	. Protec	tion level: 🛛		
Sample 10 Sample 10 Solvy Solv		Type of OVM.: FID	Total depth: 80F	t. Opth t	oş6Ft.		
Sancie ID (Septial) (1/2	· · · · · · · · · · · · · · · · · · ·	Well Development Da	te:	Well II	: OLD-17-10C		
0		Soil/Rock and c		Lithologic symbol Soil dass.	Blows/6-in.	e je ce we	
	5	Begin sample collection at OLD-17-04 boring/well. Light gray silty fine sand d with clay, dry.	SP/SC	4,4,3,2 3,2,2,10 2,2,8,4 2,2,5,5 8,8,2,1 1,1,1,2 2,2,1,1 5,8,7,11 4,4,8,7 2,4,8,8			

Clent:	SOUTHDIVN	IAVE	ACE	NGCOM			-		-	ng Na.: 0LD-17-10 Na.: CTO 107	
Contre	ictor: Custo	1)				ne de la Completa de Completa de la completa del la completa de la completa de la completa de la completa de la completa de la completa del la completa del la completa del la completa del la complet	Date started: 02	2/04/87	, 555	Complied: 02/0	4/97
lethoo	d: SPT				Casing Size: 2 in.	<u> San Laterian (1884)</u>	Screen Int.: 5 1		Prote	ction level: D	
Found	i Elev.:				Type of OVM: FID		Total depth: 80F		 	to ♀ 8 Ft.	
0 00 8	d by: JN				Well Development Dat	e:				D: OLD-17-10C	
Pepu Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		Description comments from Pa		Lithologic symbol	Soll class.	Blows/6−in.	
]			45%						SP		П
4			60%							8,10,14,13	
-				0						5,4,2,4	
+			70%								
			7.00	0						5,4,5,5	
]			70%	0						6,8,7,4	
-			60%							9,0,1,7	
5—				0						NS	損
~ _	de e j		0	0 -						1004	
4	Service Survey die		100%	1	Jark gray wandy clay, sof rodules after 3".	t, law plas	ticity, hard brown		SC	1,2,2,4	
4				0						1,0,0,1	<u> </u>
			100%								
			0	0						NS	
4										0,0,0,0	
1		7	100%								
5_			00%							3,2,2,1	
-		/		0	freen silty clay, stiff, low p	lasticity	(Hawthorne).		CL	8,10,13,13	
+		7 1	00%						\right\(\cdot\)		
]	·	1	00%	-	ireen silty clay.				CL/SC	2,3,4,8	
		<u> </u>		_		· · · · · · · · · · · · · · · · · · ·					
+				1	D						
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+											
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roject: BRAC NTC Orlando		Site: S.A. 17		Borin	Q No.: OLD-17-11B	·	
Client: SOUTHDIVNAVFACEN	GCOM			Jab N	lo.: CTO 107		
Contractor: GP		Date started: 0	4/28/98	Compltd: 04/28/98			
Method: HSA	Casing Size: 2 in.	Screen Int.: 5	lt.	Protection level: 0			
Ground Elev.:	Type of OVM.: FID	Tatal depth: 20			t o ♀ 3 Ft.		
Lagged by: MCT	Well Development Dat	te:		Well II	: OLD-17-11B		
Recovery Challet Spanner Chall		x Description comments	Lithologic symbol	Soll class.	Blows/6−in.		
	Pasthole to 4 feet bis.						
	O Brown, tan, gray, slity fine	e sand. Soft, loose.	14674674	SP	10,12,12,14	Ā	
5——————————————————————————————————————	0				5,12,12,14		
100%	0				10,18,20,20		
60%	0				01,01,8,8		
60%	0				10,10,12,17 8,17,12,12		
15—	0				5,5,8,7		
90%	0				5,7,7,8		
20-	70						
					:		
25—							
	PAGE	E 1 of OLD1711B			HL	A-ES	

Ches.	COLITION	N 4 3 2		1000		S.A. 17		Bori	ng No.: OLD-17-12	2C	
	: SOUTHDIV	NAV	FAUE	NGCON	A		<u> </u>	Job	No.: CTO 107		
	d: HSA/MUE	——————————————————————————————————————			Casing Size: 2 in.	Date started: 04/28/98			Compitd: 04/28/98		
	d Elev.:		· · · · · · · · · · · · · · · · · · ·		Type of OVM: FID	Screen Int.: 5 ff		 	ction level: []		
	d by: MCT		tr	· · · · · · · · · · · · · · · · · · ·	Well Development Date:	Total depth: 84F	t.		to \$ 3 Ft.	•	
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		on	Lithologic symbol	Soll class.	D: OLB-17-12C Blows/6-in.		
, 1 1				0	Posthole to 4 feet bis.						
5-			80%	0	Brown, tan, gray, silty fine sand. S	aft, laose.		SP	10,12,12,14 5,12,12,14		
1			100%	0					10,18,20,20		
0-			60%	0					01,01,8,0		
1			60%	٥					10,10,12,17		
5—			80%	0					8,17,12,12		
1			90%	0					5,5,8,7		
		1	00%	0					5,7,7,8		
		'	00%	0					6,8,7,7 4,4,3,3		
			00%	0	Light gray silty, clayey fine sand.		s	P/SC	3,3,8,6		
5—			00%	0	- g g. c, city, cityer line sailt.				3,3,5,5		
1			00%	0					4,5,5,7		
		10	00%	0	Light gray silty fine sand. Stiff, par places.	tially cemented in		SP	3,3,4,4		
1	j	10	00%	0					4,5,8,8		
;		10	00%	0					2,12,12,14		

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Project: BRAC NTC Orlando	SH	te: S.A. 17		Borin	g No.: OLD-17-13B	
Clent: SOUTHDIVNAVFACENGCOM				Jab N	la.: CTO 107	
Contractor: GP		Date started: 04	/28/98		Compltd: 04/28	/98
Method: HSA	Casing Size: 2 in.	Screen Int.: 5 ft.		Protec	tion level: D	
Ground Elev.	Type of OVM: FID	Total depth: 20Ft	•	Opth t	a ¥ 3 Ft.	4
Lagged by: MCT	Well Development Date:		•	Well II): OLD-17-13B	
Depth Fecovery (ppm) Recovery (ppm)	Soll/Rock Desc and comme		Lithologic symbol	Soll dass.	Blows/8−in.	
50% O G G G G G G G G G G G G G G G G G G	ray to brown silty, fine-grains oarly sarted.	ed sand, Soft, loose,		SP	28,32,20,21 28,24,26,28 12,12,14,14 8,8,8,8 6,8,5,5 5,4,5,6 5,5,5,5	
25—	0405404	OLD1713B			į. ir	A-ES

Projec	t: BRAC NT	C Or	lando			Site: S	.A. 17		Borir	Ig Na∴ OLD-17-14	c	
Client:	SOUTHDIV	IVAP	FACEN	IGCOM		<u></u>	<u>san di</u> antes, di proprinta di dassi	er er er Lenn state i er erk ergert	Job	No.: CTO 107		
Contra	ictor: GP	No. or all	. The same	S. See S. S.	en de la companya de		Date started: 0	4/28/98	Compltd: 04/28/98			
Metho	d: HSA/MUD				Casing Size: 2 in.		Screen Int.: 5 f	t.	Protection level: D			
Ground	d Elev.:				Type of CVM.: FID		Total depth: 60f	Ft.	Opth			
rogge	d by: MCT			,	Well Development Dat	8:			Well II	D: OLD-17-14C		
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		Descriptio omments	'n	Lithologic symbol	Soil class.	Blows/6-in.		
1				0	Pasthale to 4 feet bis.			-	SP	26,32,20,21		
5—			50%	0	Brown, tan, gray, slity fine	sand. So	oft, laase.		5	28,24,28,28		
4			100%									
-	•	1	50%	0						12,12,14,14		
10		1	90%	0						8,8,8		
+		7	90%	0						8,8,5,5		
15—		7	80%	0						5,4,5,8		
-		7	80%	0						5,5,5,5		
-			60%	0						4,4,3,3		
20-		7	60%	0						3,3,3,3		
			70%	0						3,3,2,2		
25—			80%	0						1,1,2,2		
-			70%	0						3,3,3,2		
1			70%	0						4,3,10,10		
30-			50%	0						3,3,3,3		
			80%	0	Olive green clayey, silty sa	and.			SC	5,8,20,20		
35-			40%	0	Light brown silty fine sand	with strin	gers of alive		SP	8,10,10,11		

roject: BRAC NT	C Orlan	do	SH	te: S.A. 17		Boring	No. 0LD-17-14C	
lent: SOUTHDIV	NAVFA	CENGCON				Jab No	.: CTO 107	. 17 (Laure
Contractor: GP				Date started:	04/28/98		Compitd: 04/28/9	8
lethod: HSA/MUD	_ 		Casing Size: 2 in.	Screen Int: 5	ft.	Protect	ion level: D	
iround Elev.:			Type of OVN.: FID	Total depth: 69	OFt.	Opth to	¥3 Ft.	
ogged by: MCT			Well Development Date:			Well III:	OLD-17-14C	
Sample ID	Split Spoon	Recovery Headspace (pom)	Soil/Rock Desc and comme Continued fro	ents	Lithologic symbol	Soll class.	Blows/6−in.	
1	4	0% 0		pata		SP	7,8,9,8	
		0%					5,5,5,5	
10-		0%	·				3,2,0,6	
	-	0 0					6,6,7,1	
		0%					7,7,8,7	
45—		0					5,8,8,5	
4		0%	Olive green clayey, silty fine s	and.			3,5,5,7	
50-		0					1,1,1,1	
		0 30%					2,1,3,3	
55—		0 30%					1,2,1,1	
		0 80%	Dark green silty, sandy clay.	Dry, saft, law		SP/SC	2,1,8,10	
		0 80%	plasticity.				10,11,01,11	
80-			TO					
-								
в5—							•	
1								

Project: BRAC NT	C Orlando)		Site: S	.A. 17		Borli	ng Na.: OLD-17-15,	A
Clent: SOUTHDIV	NAVFACE	NGCOM			د د د در امر دا د دار درد و درستان اردو مورسان	<u> </u>	Jab	No.: CTO 107	
Contractor: GP					Date started: 0	4/28/98		Compite: 04/28	9/98
Method: HSA			Casing Size: 2 in.		Screen Int.: 10	ft.	Prote	ction level: D	
Ground Elev.:			Type of OVN.: FID	·	Total depth: 12.5	Ft.	Dpth	to ұ3Ft.	
Logged by: MCT			Well Development Da	te:	·		Well I	D: OLD-17-15A	
Sample ID (Depth) (Type)	Split Spoon Recovery	Headspace (ppm)		k Descriptio comments	nc.	Lithologic symbol	Soll class.	Blows/6-in.	
5—	80%		Posthale to 4 feet bis. Light brown, silty, fine-graph occuring sorted.	ained sand	1. Saft, laase,		SP	12,12,12,14	
15—									

Projec	t: BRAC NT	C Orla	ando			Site: S./	1. 17	- 2"	Borin	19 No.: OLD-17-168	
Clent:	SOUTHDIV	NAVF	ACEN	GCOM				ar, extendes	Jab	Na.: CTO 107	
	ictor: GP						Date started: 0	4/28/98	L ARROAD	Compite: 04/28	/98
Netho	d: HSA				Casing Size: 2 in.		Screen Int.: 51	t.	Prote	ction level: D	N 18 W
	i Elev.:				Type of OVM.: FID		Tatal depth: 20.	5Ft.	Opth	to ♀ 3 Ft.	
	d by: MCT				Well Development Da	ite:		and the other	Well I	D: OLD-17-16b	
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		k Description comments		Lithologic symbol	Soil class.	Blows/8-in.	
				0	Posthole to 4 feet bis.				- 92	12,12,12,14	Ā
5			80%		ight brown, silty, fine-groorly sorted.	rained sand	Soft, 100se,		-	10,10,8,8	
			80%	0						10,10,10	
10-			100%	0						3,3,3,3	
			90%	0						3,3,3,3	
15—			90%	٥	·					1,1,3,3	
			100%	0						4,8,4,5	
_			90%	0						5,5,5,5	
20					TD	10 ₀₀	<u>.</u>				
											÷
25											
					PAGE	1 of OLD	1716B			HI	A-ES

O#	COUTURE	NI A L		1000		Site: S	i.A. 17		Borin	ng Na.: OLD-17-17	'C
	: SOUTHDIV	NAV	FACEN	NGC OF	A	nes que esta esta esta esta esta esta esta est	<u>an a saan dalah dan alimit sas</u>	eriesty hoss de tre	Jab I	No.: CTO 107	
	d: HSA/MUD	···.,,			G-1-0	<u> </u>	Date started: 0			Compltd: 04/2	29/98
	d Elev.:				Casing Size: 2 in.		Screen Int.: 5 1			ction level: D	
	d by: MCT				Type of OVM: FID Well Development Dat		Total depth: 58	Ft.		to ¥ 3 Ft.	
	· · · · · · · · · · · · · · · · · · ·			a)		 			Mel II	D: OLD-17-17C	-
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		Description omments	n	Lithologic symbol	Soll class.	Blows/6-in.	
				٥	Pasthole to 4 feet bis.						
5-			80%	;	Light brown, silty, fine-grapoorly sorted.	ined sand	. Soft, loose,		SP	.12,12,12,14	
-		1	80%	0						8,8,01,01	
-			100%	0						10,10,10,10	
10-		7	90%	0	,					3,3,3 ,3	
4			80%	0						3,3,3,3	
15—			90%	0						1,1,3,3	
			100%	0					. ** - \$	4,8,4,5	
				0						5,5,5,5	
0-			90%	0						1,1,8,6	
			100% 100%	0						1,1,1,1	
-			00%	0						1,1,1,2	
5			00%	0	As above, with interbedded	layers of	light green	- S	P/SC	6,6,7,7	
			30%	0	sandy silt.					7,8,9,9	
ا ا		1 5	90%	0					SP /	2,2,7,8	

Project	BRAC NT	C Ori	ando			Site: S	.A. 17		Barin	g No.: OLD-17-17C	
Clent:	SOUTHDIVI	NAVE	ACEN	GCOM					Jab N	lo.: CTO 107	
Contrac	ctor: GP						Date started: 04	/29/98		Compitd: 04/29/	88
Method:	: HSA/MUD	··.			Casing Size: 2 in.		Screen Int.: 5 ft.		Protec	tion level: D	
Ground	Eley.:				Type of OVN.: FID		Total depth: 58Ft		□pth t	a ¥ 3 Ft.	1
	by: MCT				Well Development Dat	e:			Well II	: OLD-17-17C	
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)	Soil/Rock and c Continued	omments		Lithologic symbol	Soll class.	Blows/6-in.	
]		1	40%		Light brown, silty, fine-gracemented with iron staining	sined san			SP	The second secon	
1		7	50%	0						8,10,10,12	
35—		7	80%	0						8,8,8,8	
1		7	80%	0						2,3,4,5	
+			80%	0	Above grades into light gr coarse-grained sand with				SP/SC	2,4,4,4	
40-			25%	٥						1,1,1,5	
			50%	0						9,9,9,14	
45			75%	0						5,5,5,5	
			80%	0						4,5,5,4	
1			90%	0						2,2,3,3	
50-			80%	0						5,3,2,1	
1			80%	0						1,1,1,1	
55—			80%	0					CL	1,1,3,8	
			80%	0	Light green silt/clay/sand	j.			SP/SC	3,8,7,9	f
7			o∪ <i>1</i> 6		םד	- -					
60											

Project: BRAC N	C Orland	lo		Site: S	i.ä. 17		Bori	ng No.: OLD-17-18	A
Clent: SOUTHOI	NAVFAC	ENGCOM			e <u>n i anna ki de</u> monasta a ning a ning	<u>- 18</u> , 21 a 18, 2 day	Jab	No.: CTO 107	
Contractor: GP					Date started: 0	4/30/98	*	Compitd: 04/30	0/98
Method: HSA			Casing Size: 2 in.		Screen Int.: 10	ft.	Prate	iction level: 0	
Ground Elev.:		·	Type of OVM.: FID		Total depth: 12F	t.	Dpth ta ♀ 3 Ft.		
Logged by: MCT			Well Development Dat	e:		South of Street	Well 1		
Sample ID (Type)	Split Spoon Recovery	Headspace (ppm)		Descriptio omments	on.	Lithologic symbol	Soll class.	Blows/6-in.	
-			Posthole to 4 feet bis.						
5	30%	NA*	Light brown, gray, silty fine loose, poorly sorted.	e-grained	sand. Soft,		SP	8,8,10,10	
	1005	→ NA						7,7,7,7	
-	1009	NA						10,11,18,20	*
10	70%	NA NA						8,10,12,18	
			TO						
15—			* FID out at order						

(discr. puvo	ITC Orlando			Site: S.A. 17			Borin	No: OLD-17-19B	
Clent: SOUTHD	VNAVFACE	NGCOM					Jab N	a: CTO 107	
Contractor: GP	· <u>·····</u>			Date :	tarted: 05/01/	/98		Complied: 05/01/	98
Method: HSA			Casing Size: 2 in.	Scree	n Int.: 5 ft.		Protec	tion level: D	
Ground Elev.:			Type of OVM: FID	Total	depth: 30Ft.		Dpth t	o ¥ 3 Ft.	
Lagged by: MC	Т		Well Development Da	te:			Well II	: OLD-17-19B	
Sample I 합니 (Depth) C (Type)	કે જે	Headspace (ppm)		Description comments	 • •	Lithologic symbol	Soll class.	Blows/6-in.	•
5—	30%	NA* -	costhole to 4 feet bis. Light brown, gray, slity fire cose, poorly sorted.	ne-grained sand.	Soft,		SP	8,8,10,10 7,7,7,7	
10—	100%	- NA						10,11,18,20 8,10,12,18	
	70%	NA NA						10,7,8,10	
15—	100%	NA NA						10,8,8,10 8,3,3,4	
	R001 R001	NA NA						8,3,5,4 8,5,5,4	
20—	1000	NA NA	Brown sandy silt, soft.				SC	2,3,6,8	
25—	80%	NA	Light brown silty sand.				SP	7,7,10,12	
	1009	0	Brown sandy silt.				SC	6,6,7,8 7,5,8,8	
30-	1005	*	TD				i	, M.,	
-			* FID out of order						

Clastic SOUTHOIVNAYFACENGON	Projec	t: BRAC NT	C 0	rlando			Site: 9	G.A. 17	entral en	Bor	ing Na.: 0LD-17-2	OC
Contractor: GP	Clent:	SOUTHDIV	NAV	FACE	NGCOM					Jab	No.: CTO 107	
Type of OVA.1 FID Total depth 82Ft. Dight to 2 3 Ft.	Contre	ictor: GP						Date started: 0	5/01/98	·		1/98
Sample 10 So So So So So So So S	Method	1: HSA/MUD)			Casing Size: 2 in.		Screen Int.: 5 ft	t.	Prote	action level: D	.85
Sample 10 (hepth)	Ground	i Elev.:				Type of OVM.: FID		Total depth: 62F	t.	Dpth	to ♀ 3 Ft.	
Sox NA# Light brown, grey, sitry fine-grained sand. Soft, SP 8,8,10,10	Logge	d by: MCT				Well Development Dat	t e:			Well	ID: OLD-17-20C	
Section Sect	Depth Ft.	(Depth)	Spllt Spoon	Recovery	Headspace (ppm)	and c		חכ	Lithologic symbol	Soll class.	Blows/6-in.	
100x						Posthole to 4 feet bis.				;	·	
100x	5—		7	30%	NA*	Light brown, gray, silty fine loose, poorly sorted.	e-graine(sand. Soft,		SP	01,01,8,8	
100% NA	-		7	100%	NA						7,7,7,7	
NA	1			100%	NA						10,11,18,20	
NA	10-				NA						8,10,12,18	
NA				/ U%	NA						10,7,8,10	
NA				80%	NA						10,8,8,10	
100% NA 100%	15—			100%	NA.							
100% NA Brown sandy silt, soft.				100%								
100% NA Brown sandy silt, soft. SC 3.5,5,4				100%							8,3,5,4	
SP SP T,7,10,12 SP T,7,10,12 SP T,7,10,12 SP T,7,10,12 SP T,5,8,8 SP T	-0!		7	100%	NA	Brown sandy silt, soft.		· <u>·</u>		SC	8,5,5,4	
7,7,10,12 90% NA 100% 0 Brown sandy silt. 1.1 100% 0.8 1.10 Light brown silty, fine-grained sand with interbedded olive green silty sand, soft, stiff in places. 1.1 100% 0.8 100% 1.1 100% 1.2 1.3 100% 1.4,8,9 1.4,8,9 1.4,8,9 1.4,8,9	+			80%	NA						2,3,8,8	
NA 100% 100% 100% 1.1 100% 0.8 100% 0.8 100% 0.8 100% 0.8 100% 0.8 100% 0.8 100% 100% 0.8 100%	25—			90%	NA	Light brown silty sand.				or	7,7,10,12	
Brown sandy silt. 100% 1.1 100% 0.8 100% 0.8 100% 0.8 100% 0.8 100% 0.8 100% 0.8 100% 1.1 100% 0.8 100% 1.1 100% 0.8 100% 1.1 100% 10	4				NA						6,6,7,8	
1.1 100% 0.8 Light brown silty, fine-grained sand with interbedded olive green silty sand, soft, stiff in places. 100% 0.8 8,10,10,14	1				0	Brown sandy silt.				SC	7,5,8,8	
O.8 Light brown silty, fine-grained sand with interbedded olive green silty sand, soft, stiff in places. 100% O.8 8 8,10,10,14	10-				1.1						2,1,1,2	
0.8					8.0	Light brown silty, fine-grain olive green silty sand, soft,	ned sand , stiff in p	with interbedded laces.		SP	1,4,8,9	
	5_				0.8					**, *,	8,10,10,14	
PAIRE 1 Of 111 111 / 2011 :	J —	·				PÁGE 1	of OLD4	720C			g 4s	A-ES

raject: BRAC NT	C Orlando			Site: S	A. 17		Borin	g No.: OLD-17-20	C
lent: SOUTHDIV	NAVFACEN	GCOM					jab N	lo.: CTO 107	
Contractor: GP		·		11111111	Date started: 05	/01/98		Campitd: 05/01	/98
lethod: HSA/MUD			Casing Size: 2 in.		Screen Int.: 5 ft	•	Protec	tion level: 🛛	
Ground Elev.:			Type of OVN.: FID		Total depth: 82F	t.	Opth (a⊈3 Ft.	
agged by: MCT			Well Development Dat	:8:	· · ·		Well II): OLD-17-20C	
Sample ID (Depth) (Type)	Split Spoon Recovery	Headspace (ppm)		Description		Lithologic symbol	Soll class.	Blows/6-in.	
]	100%	0.4		es si que	grand and the state of the stat		SP	6,8,11,17	
	100%	0.4						12,14,18,18	
10-	80%	0						5,6,8,8	
	30% 50%	0						01,01,8,8	
45—	50%	0						7,8,15,12	
	60%	0						7,8,10,18	
-	60%	0			,			4,3,1,8	
50—	100%	0	Dark green clayey silt wit	th sand. S	Satt, wet.		SC	1,1,1,1	
-	100%	1 1						2,1,2,1	
55—	100%	0						1,2,2,3	
	100%		(Hawthorn)					1,2,1,2	
80-	100%	0	Dark green clay. Soft, w	et, low pla	esticity.		CL	1,2,1,1	
-	100%	_	TO					·	
85									
			* FID out of order						
70			V 1 10 000 01 01061				1		
			PAGE	2 of OL	D1720C		<u> </u>	H	A-ES

Project: BRAC	NTC	Orl	ando		,	Site: S	G.A. 17		Borin	9 No.: OLD-17-21	В
Clent: SOUTH	DIVN	AVF	ACEN	GCOM	- <u> </u>				Jab I	No.: CTO 107	
Contractor: G	P	44.47	4 UT Y 1 F				Date started: 0	5/05/88		Compltd: 05/0	5/98
Method: HSA					Casing Size: 2 in.		Screen Int.: 5 ft	t.	Prote	ction level: O	
Ground Elev.:					Type at OVM.: FID		Total depth: 20.5	5Ft.	Dpth	ta ¥ 3 Ft.	
Logged by:	1CT				Well Development Da	te:			Well II	3: OLD-17-21B	
Bample 당 (Dep	ID h} e)	Split Spoon	Recovery	Headspace (ppm)		k Description comments	· nc	Lithologic symbol	Soll class.	Blows/B-in.	
5			90% 90% 90%	0 0	Brown, gray, silty, fine-gr poorly sorted.	rained san	d. Soft, loose,		SP	8,10,10,12 7,10,12,12 8,10,12,14 8,8,8,8	
15			90%	0						4,8,4,5 3,5,4,5 3,8,8,9	
20-			90%		םד						
25—					0,405	1 of OLI	74721D				A-ES

roject: BRAC NTC Orlan	iuo	Site: 9	S.A. 17	- [Boring	No.: OLD-17-22C	
Hent: SOUTHDIVNAVFA	CENGCOM		gara saar arga ahaan ka sagaa ahaa		Jab N	a: CTO 107	
Contractor: GP			Date started: 05/04	1/98		Compltd: 05/04/	'98
lethod: HSA/MUD	-	Casing Size: 2 in.	Screen Int.: 5 ft.		Protec	tion level: D	
Ground Elev.:		Type of OVN.: FID	Total depth: 60Ft.	.,	Opth t	a ¥ 3 Ft.	
ogged by: MCT		Well Development Date:			Well III	: OLD-17-22C	
Sample ID oo did not be seen to see the see the see the seen to see the see th	Recovery Headspace (ppm)	Soil/Rock Descript and comments	cion	Lithologic symbol	Soll dass.	Blows/6-in.	
0.7		Posthole to 4 feet bis.					1
5 9	0	Brown, gray, silty, fine-grained sa poorly sorted.	nd. Satt, laase,		SP	8,10,10,12	
9	0 0%	From an com.				7,10,12,12	
	0 0					8,10,12,14	
10—	0 0					6,8,8,6	
- S	0 90%					8,5,4,4	
15—	00%					4,6,4,5	
	0					3,5,4,5	
	90%					3,8,8,9 3,5,4,4	
20-	90%					2,2,2,2	
	90%					1,1,2,2	
25—	90%	As above, with interbedded layer sandy silt.	s of light green		SP/SC	1,2,2,3	
	90%				·	2,2,2,3	
30-	60%	Light brown silty, fine-grained sa cemented with iron staining.	and, slightly		SP	1,3,4,8	
	60%					1,3,4,8	
	60%				н.	4.8,8,9	

Clost-	SOUTHDIV	MAN	EACE	ICCOM		Site: S	LA. II		 -	ng No.: OLD-17-22	?C
	ctor: GP	NAV	FALE	NGCOM		<u> </u>		n (1880), mediak nigap	Job	No.: CTO 107	
			<u> </u>	 	Dark - St.		Date started: 0		Ť :	Compile: 05/04	4/98
	: HSA/MUE	!			Cesing Size: 2 in.		Screen Int.: 5		Prote	ction level: D	. 1
	Elev.		 		Type of OVAL: FID		Total depth: 80	Fł.	 	to ¥ 3 Ft.	···
.ogge	iby: MCT			.	Well Development Dat	:e: 		en e	Well I	D: OLD-17-22C	
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		Description omments		Lithologic symbol	Soll class.	Blows/6~in.	
]			60%	0					SP		— 河
]			60%							2,5,10,12	
4				٥						3,8,3,3	
			80%	0						2122	
-			70%					_	CD / CC	2,1,2,2	
+				0	Above grades into light gr fine-grained sand.	een claye	y, silty,		SP/SC	1,2,3,5	<u> </u>
1		7	70%								
5—		7	80%	0						1,1,2,2	
+										No Recovery	
4			NA							·	目
]			80%	0						1,2,2,3	
			00 k							No Recovery	
+		7	NA							no necovery	
+				0	Alternating layers of dark	green silt	y clay and		SC/CL	1,1,1,1	
1			80%	0	clayey silt. Clay moderate					0000	
5—			90%							2,2,3,2	
-				0						2,3,5,10	
1			90%								
			70%	0	Light green clay/silt/sand.	·			SC	3,3,5,7	
							· · · · · · · · · · · · · · · · · · ·	_ = =			
-	,				TD						
]											
-											
5—	*										
+											
1								* -			
لــر	\	1	1	}					1		

Client: SOUTHDIVNAVFACENGCOM Contractor: GP Method: HSA Ground Eiev.: Logged by: MCT Sample ID (Depth) (Type) (Type) Refer to CPT log for 17GOIB. Log used to determine well construction.	s		Prote	No.: CTO 107 Compite: 05/0 Action level: 0 to \$\frac{1}{2}\$ 3 Ft. CD: OLD-17-23A Blows/6-in.	05/98
Casing Size: 2 in. Ground Elev.: Logged by: MCT Sample ID (Depth) (Type) Type of OVN.: FID Well Development Date: Soil/Rock Description and comments Refer to CPT log for 17Q01B.	Screen Int.: 10 ft. Total depth: 12.5Ft.		Dpth Well 1	to ¥ 3 Ft. C): OLD-17-23A	05/98
Ground Elev.: Logged by: MCT ## Development Date: Sample ID OO SO SO SE CHE COMMENT OF THE COMMENT OF THE COMMENT OF THE COMMENTS OF THE CO	Total depth: 12.5Ft.		Dpth Well 1	to ¥ 3 Ft. ID: OLD-17-23A	
Graund Elev.: Logged by: MCT ## Development Date: Sample ID ON DEVELOPMENT DEVELOPMENT DATE: Soil/Rock Description and comments (Type) ## PREfer to CPT log for 17001B.	otion		Well 1	D: OLD-17-23A	
Logged by: MCT ### Development Date: Sample ID OO Soll/Rock Description and comments (Type) ####################################	otion s	Lithologic symbol	L		
Sample ID ook Span Soil/Rock Description and comments (Type) Soil/Rock Description and comments (Type) Refer to CPT log for 17GOIB.	otion s	Lithologic symbol	Soil dass.	Blows ∕6−in.	88
	ruction.				

OUTHDIVN. OF: GP HSA IEV.: Y: MCT ample ID (Depth) (Type)	Split Spoon Split Spoon Recovery Recovery Split Spoon Split Split Spoon Split Spoon Split Split Spoon Split	Headspace (ppm)	Casing Size: 2 in. Type of OVN.: FID Well Development Date: Soll/Rock Descrand commer Refer to CPT log for 170018. Log used to determine well cons	ts	it.	Prote	No.: CTO 107 Compite: 05/0 ction level: 0 to ¥ 3 Ft. D: OLD-17-24B Blows/6-in.	D5/98
HSA lev.: y: MCT	Split Spoon Recovery		Type of OVN.: FID Well Development Date: Soll/Rock Desc and commer Refer to CPT log for 179018.	Screen Int.: 5 to Total depth: 20 de	Ft.	Opth Well I	ction level: 0 to \$ 3 Ft. D: OLD-17-24B	D5/98
lev.: y: MCT	Split Spoon Recovery		Type of OVN.: FID Well Development Date: Soll/Rock Desc and commer Refer to CPT log for 179018.	Total depth: 20	Ft.	Opth Well I	ta ፯ 3 Ft. D: OLD-17-24B	Пии
y: MCT	Split Spoon Recovery		Well Development Date: Soll/Rock Descrand commer Refer to CPT log for 179018.	iption ts		Well I	D: OLD-17-24B	
	Split Spoon Recovery		Soll/Rock Desc and commer Refer to CPT log for 170018.	ts	Lithologic	J		
ample ID (Depth) (Type)	Split Spoon Recovery		and commer Refer to CPT log for 170018.	ts	Lithologic symbol	Soil dass.	Blows/6-in.	
		1 1		truction.				
			Log used to determine well cons	truction.		ŀ		لللا
			ТО			,		
					TD PAGE 1 of OLD1724B			

Project	BRAC NT	C Orl	ando		<u> </u>	Site: S	S.A. 17		Borin	g No.: OLD-17-2	5C
Clent:	SOUTHDIV	NAVE	ACEN	IGCOM					Jab I	No.: CTO 107	
Contra	ctor: GP						Date started: 05/	07/98		Compltd: 05/0	07/98
Nethod	: HSA/MUE) .		. 4	Casing Size: 2 in.		Screen Int.: 5 it.		Protec	ction level: 🛛	
Ground	Elev.:				Type of OVM: FID		Total depth: 83Ft.		Dpth (to ¥ 3 Ft.	
Logged	d by: MCT				Well Development Dat	e:			Well II): OLD-17-25c	
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)		omments	on	Lithologic symbol	Soll dass.	Blows/6-in.	
		\prod		l	Refer to CPT log for 1700		otion				N N
5 10 15 11 12 25 12 25					Log used to determine wel	l constru	ction.				
35—					·						
40-											
45-											
50-									}		
55—							•				
- 											
85-					TO	of OL					LA-ES

Clearles SOUTHDIVNAVFACENGEOM Contractor: GP Contractor: GP Casing Size: 2 in. Casing Size: 2 in. Soroan Int.: 10 ft. Protection level: D Ground Elev.: Type of OVN.: FID Total depth: !2.5Ft. Dith to \$\frac{3}{3}\$ Ft. Logged by: MCT Soul/Rock Description and comments Soul/Rock Description and comments Refer to CPT log for 170003. Log used to determine well construction.	Project: BRAC NTC Orlando	Site	: S.A. 17	Baring Na.: OLD-17-28A
Nethod: HSA Ceshq Size: 2 in. Screen Int.: 10 ft. Protection level: D		COM	and the second s	Jab No.: CTO 107
Sample ID Sample ID Sample ID Soll/Rock Description and comments Sample ID				Compite: 05/05/98
Logged by: MCT Well Development Date: Well ID: OLD-17-28A Soll/Rock Description and comments Blows/6-in. Refer to CPT log for 170003. Log used to determine well construction.			- 	
Sample ID (Depth) (Type) How the state of th			Total depth: 12.5Ft.	
Refer to CPT lag far 170003. Lag used to determine well construction.				Wei ID: OLD-17-28A
Log used to determine well construction.	Depth Tt. Spill (Jacob Mark) Recovery Redspace	Soil/Rock Description and comments	Lithologic symbol	ss ପ Blows/6-in. ତ
				HH
	5—		ruction.	
	15	OT .		

Contractor GP Contra	Project: BRAC NTC Orlando	Site: S	S.A. 17	Boring No.: 0LD-17-27B	
Date started; OS/OS/88 Compité: OS/OS/88	Clent: SOUTHDIVNAVFACENGEOM			Job No.: CTO 107	
Type of OVAL: FID Total depth: 20.5F1. Dight to 3 3 F1.		e e e e e e e e e e e e e e e e e e e	Date started: 05/05/98	Compitd: 05/05/98	
Logod by: MCT Well Davidopment Deta: Mell ID: OLD-I7-27B	Method: HSA	Casing Size: 2 in.	Screen Int.: 5 ft.	Protection level: 🛘	
Sample ID September Mel ID: OLO-IT-278		Type of OVM: FID	Total depth: 20.5Ft.	Opth ta ¥ 3 Ft.	
Refer to CPT log for I7G003. Log used to determine well construction.		Well Development Date:	amenda (Miller Handson Leading)	Well ID: OLD-17-27B	
5— 10— 20— TD	Depth T. Split (Debty) T. Headspace (Ppm) (Debm)		Lithologic symbol	ss BD Blows/6~in. S	
5—	1 1 1 1				11
15— 20— TO		g used to determine well constru	e tion.		
- TD					
176	25—				ċ

Proje	ct: BRAC NT	C Orla	ndo			Site: S	.A. 17		Bar	Ing No.: 0LD-17-2	:BC
Clent	: SOUTHDIV	NAVF/	ACEN	GCOM		 			Jab	No.: CTO 107	
Contr	actor: GP	<u> </u>					Date started: 05	5/07/98	<u> </u>	Compltd: 05/0	07/98
Metho	xd: HSA/MUD		* ***		Casing Size: 2 in.		Screen Int.: 5 ft		Prote	ection level: D	
Graun	d Elev.:				Type of OVM: FID		Total depth: 83F	t.	Dpth	to ¥ 3 Ft.	
Logge	d by: MCT				Well Development Da	ite:				ID: OLD-17-28C	· · · · · · · · · · · · · · · · · · ·
Depth Ft.	Sample ID (Depth) (Type)	Split Spoon	Recovery	Headspace (ppm)	and t	k Description	'n	Lithologic symbol	Soll class.	Blows/6-in.	
5-10-15-135-135-135-135-135-135-135-135-135-				ŀ	er to CPT log for 1700		etion.				
50 - 55 - 55 - 55 - 55 - 55 - 55 - 55 -				TO			<u>.</u> .				
65 —			•	-	מאפר י	1 of OLD	17220	, ,	•		A-ES

and the property of

			DEVELOPME	NI RECORD		
roject: SITE S	CREENING AHDD	S.A. 17	Well Installation [Date:		Project No
lient:			Well Developmen	nt Date:	Logged by	
SOUTH DVN /ell/Site I.D.:	BUFACENGEC	<i>אורי</i>		5/25/95	HUFFON	N 000
	0-17-01		Weather:	CONUCD	Start Date: 5/25/9	
olume of Drilling F	luid Lost (gal.)	/A	Volume of Water and Filter Pack (g	in Well	Start Time:	
stalled Depth Fron	Top of Well Casin	ng to Bottom of W				
tial Depth to Wate	r (tt.) 4.80		Initial Depth to We	ell Bottom: 12.6.	2	
ater Level during li	nitial Pumping/Pur		E(CRI) EL	Military and the state of the 		· .
iter Level at Termi	nation of Pumping			om at termination of I	Pumping/Purging (ft	.) RECORDED
	WELL DEVELOP	MENT				Approximate
Time	Temp.	рН	Conductivity	Turbidity	Other	Pumping Rati (gal/min)
08:11	25./	6.59	730.	179.8	20.91/.	. 5
<u>C8:21</u>	26.0	6.65	730.	50.6	25	. 5
08:31	25.5	6.69	710.	10.3	30	5
<u>C8:41</u>	26.C	6.69	710.	7.3	35	. 5
18:51	26.0	6.69	700.	5.3	4-0	5
69:01	26.0	6.69	710.	4.3	45	.5
END OF WELL [DEVELOPMENT					
		of removed water	r. type and size of pu	mp, volume of water	removed.)	
USEV	PARASTA	LTIC PUN		99639 F		75gp/.
W137	TOR CLUP	Κ.				•
•						
	•					
		11				
		<i>u</i> /	2.7			
		Allare 8	Que ten			

		WELL	DEVELOPMEN	NT RECORD		
oject: 5176 S	CREEN ING INDO	S.A. 17	Well Installation D	ate:		Project No.
ient:	INVENCENT, CC	om	Well Developmen	t Date: 5/24/95	Logged by:	Checked b
ell/Site I.D.:	1-17-02		Weather: CLC	or a so	Start Date: 5/24/95	Finish Date 5/24/9
olume of Drilling Fl	luid Lost (gal.)	ls	Volume of Water i		Start Time: 13.'08	Finish Time
stalled Depth From	Top of Well Casin	g to Bottom of W	'ell:	enter de la companya	The Mark Street Charles	
tial Depth to Water	r (tt.) 4.25		Initial Depth to We	ell Bottom: 12,7/		erica de la companya
ater Level during Ir	nitial Pumping/Purg	ing (ft):	RECORDED			
ater Level at Termi	nation of Pumping	Purging (ft): <i>4.4</i> 1	Depth to well Botto	om at termination of F		RECONDED
BEGINNING OF	WELL DEVELOP	MENT		e jakasa in	en Nemala esperantada Nemala esperantada	
BEGINNING OF	WELL DEVELOP!	AENT PH	Conductivity	Turbidity	en Notae en	Pumping Rate
			Conductivity 479.	Turbidity	Other 2 0 gn/.	
Time	Temp.	рН	_	•	,	Pumping Rate (gal/min)
Time 13:45	Temp.	pH 6.7 <i>ロ</i>	479.	33.6	2090/.	Pumping Rate (gal/min) . 5
Time /3:45 /3:55	Temp. 28.0 28.0	рн 6.70 6.60	479. 470.	<u>33.6</u> <u>5.5</u>	20ga/. 25	Pumping Rate (gal/min) . 5
Time 13:45 13:55 14:00	Temp. 28.0 28.0 28.5	6.60 6.77	479. 470. 460.	33.6 5.5 7.3	20ga/. 25 30	Pumping Rate (gal/min) . 5
Time 13:45 13:55 14:00 14:10	7emp. 28.0 28.0 28.5 28.5	6.70 6.60 6.71 6.77	479. 470. 460. 461.	33.6 5.5 7.3 5.8	20 ₉₁ /. 25 30 35	· 5 · 5 · 5
Time 13:45 13:55 14:00 14:10 14:20 14:30	Temp. 28.0 28.5 28.5 29.5	6.60 6.77 6.77 6.77 6.79	479. 470. 460. 461.	33.6 5.5 7.3 5.8 2.9	20 ₉₁ /. 25 30 35 40	Pumping Rate (gal/min) .5 .5 .5 .5

Well Developer's Signature

		WELL	DEVELOPME	NT RECORD		
roject: SITE S		5.A. 17	Well Installation (Date:		Project No
lient:	INAU FOC EHGO	com	Well Developmen	nt Date: 5/24/9	Logged by:	
/ell/Site I.D.:		. 0///	Weather:	3) - 1	Start Date:	Finish Dat
			HOT ROLL		5/24/9	
olume of Drilling F	luid Lost (gal.)	/A .	Volume of Water and Filter Pack (g	7./	Start Time:	Finish Tim
stalled Depth Fron	n Top of Well Casi	ng to Bottom of We		•		•
itial Depth to Wate	or (ft.) 3.98		Initial Depth to We	ell Bottom: 12. 42	?	·
ater Level during I	nitial Pumping/Pur	ging (tt):	LEAR AND	= 80°		
ater Level at Term	ination of Pumping	/Purging (ft): 5, 9/	Depth to well Botto	om at termination of	Pumping/Purging (ft.)	RECORDED
BEGINNING OF	WELL DEVELOP	MENT				Approximate
Time	Temp.	рН	Conductivity	Turbidity	Other	Pumping Rat
12:07	Z5.0	5.87	209.	181.4	30901.	(gal/min)
12:17	24.5	6.03	202.	181.9	35971.	.5
12:27	24.5	6.12	201.	182.7	40911	.5
12:37	24.8	6.04	209.	181.4	45gol.	. 5
12:47	25.0	5.90	202.	182. Z	50901	.5
					<u> </u>	<u> </u>
END OF WELL	DEVELOPMENT					
NOTES: (Include	physical character	of removed water	r, type and size of pu	ump, volume of wate	er removed.)	
			-		15 COOR AL	0 15
(100	104.					
	•		-			
	•					
						-
		11. 1	20-1			
'ell Developer's	Signature	java. C.	Que tem			والمراجع المراجع في المحدد

	DEVELOPMENT RECORD		Project No.
Project: SITE SCRUEHING S.A. 17 HTC ORCAHOD	Well Installation Date:		27010
Client: SOUTH DIU NAV FAC ENG, COM	Well Development Date: 5/24/95	Logged by: GRISTENS HUFFITAIN	Checked by
Well/Site I.D.: 04D-17-04	Weather: CLEDIL, \$ POO	Start Date: 5/24/95	Finish Date: 5/29/95
Volume of Drilling Fluid Lost (gal.)	Volume of Water in Well and Filter Pack (gal.)	Start Time:	Finish Time: 13:55
nstalled Depth From Top of Well Casing to Bottom of We	eli:	9.	•
nitial Depth to Water (ft.) 3.28	Initial Depth to Well Bottom: 12.64	general tito i i utang kengang ang akung i k	
Vater Level during Initial Pumping/Purging (ft):	R ECORD ED)	The second section of the second section secti	1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1
Vater Level at Termination of Pumping/Purging (ft): 3.49	Depth to well Bottom at termination of Pump		OF RELOCUEL

Time	Temp.	рН	Conductivity	Turbidity	Other	Pumping Rate (gal/min)
13:04	2Z.0	6.75	312.	<u>73.2</u>	60.901	.5
13.14	22.3	6.70	318.	34.4	65 gsk	.5
13:24	22.3	6.75	316.	25.5	70gs/.	. 5
13: 34	22.4	6.71	318.	22.2	75 90/	.5
13. 43	22.4	6.66	318.	25.9	80 g.s.l.	.5
/3:53	22.0	6.72	3/2.	-17.6	85 gpl.	

END OF WELL DEVELOPMENT

NOTES: (Include physical character of removed water, type and size of pump, volume of water removed.)

USED INDIASTALTIC PUMP SDF 889519, pumper) 85 gp//aus.

WATTER WAS CLOUDY, CLEARED UP, SLIGHT ORDER.

Well Developer's Signature

then ! One toro

	(PETALLII		DEVELOPME	<u></u>		
Project: SITE S		S.A. 17	Well Installation [Date:		Project No
Client:	AVIACENA, CO	0m	Well Developmen 5/25/9		Logged to	by: Checked I
Vell/Site I.D.:	-17-05		Weather:		Start Date	e: Finish Dat
olume of Drilling Flu		·	Volume of Water	in Mol	5/25, Start Time	
<u> </u>			and Filter Pack (g	~ ~ ~	07:3/	09:41
stalled Depth From	Top of Well Casin	g to Bottom of We	: 			
itial Depth to Water	(ft.) 3.33		Initial Depth to We	ell Bottom:	2	
ater Level during In	itial Pumping/Purg	ing (ft):				
ater Level at Termin	nation of Pumping/		PECORUED Death to well Botto	om at termination of	Pumping/Purging	/ft)
200 2000 20 10 11111	and the state of t	uiging (ii). 7100	Deput to well botto	on at termination of	- Cimping Ciging	OT ROCKVEL
BEGINNING OF	WELL DEVELOPM	IENT				Approximate
Time	Temp.	ρΗ	Conductivity	Turbidity	Other	Pumping Rat (gal/min)
08:50	<u>ZZ.5</u>	6.66	<u> 318. </u>	50.6	50gx.	.5
09:00	25.8	6.59	<u> 308.</u>	135.4	<u>55</u>	.5
09:10	25.0	6.66	312.	198.2	60	5
09:20	25.Z	6.61	3//	117.9	65	.5
09:30	25.5	6.58	309.	76.6	70	<u> 5</u>
09:40	26.0	6.61	306.	102. 2	75	.5
END OF WELL D	EVELOPMENT					
NOTES: (Include p	ohysical character イン・ノネ・シャク(ア/	of removed water タムアソム・アレイ	, type and size of pu カル SJ ギニ	ump, volume of wate 289639	r removed.)	NBOUT
75	00//01/5.	WATER	CLONDY.		•	
_				,	•	
	•					
		Street l	Gne to	1		
Vell Developer's S						

oject: MTC-OR/AUDO ient: -5357HDV	Well Installa				
ient:	B	tion Date and Time	:		Project No.
		2/5/9	/	Logged by	<u> 253</u> ပို, GS Checked by:
25 63 / MMV	Well Develo	pment Date and Til	ne:/ // <u>ბიი</u>	PGH	PGA
	Weather:	2/6/16	/	Start Date:	Finish Date:
el/Site I.D.:	C/ PA	A JURCH	15 70°)	2/6/9	
dume of Drilling Fluid Lost (gal.)	Volume of Y	Vater in Well	11 M	Start Time:	Finish Time:
NOUB	and Filter Pa	ack (gal.)	16 CAL	s 1300	
stalled Depth From Top of Well Casing to	Bottom of Well:	475			
itial Depth to Water (ft):	Initial Depth	to Well Bottom:			•
5:47		47.8			
ater Level during Initial Pumping/Purging	(ft):				
	NA	Death in Wall E	ottom at Termina	tion of Pumping/Pu	raina (ft):
pth to Water at Termination of Pumping/h	Purging (ft):	Depth to yveil bo	onom at remina		NA
·					Approximate
	TIME	TEMP(C)	ρН	Conductivity	Pumping Rate
		j	5.89	7, 5	(gal/min)
EGINNING OF WELL DEVELOPMENT	13.35	34	0.01	250	
	1352	28	6.06	220	StAB 72
	100				EINE 72
:	1405	26	<u>-577/-</u>		SAME 2
	14/30	2 <u>-</u>	5,59	269	5AMD 72
	14,0				
	1445	76_	5,56	269	7/2
			5 4	260	12
ND OF WELL DEVELOPMENT	1655		<u> </u>		

Client: Well Development Date and Time: Logged by: 5/12/98 //50 //6/Muld Well/Site I.D.: Veather: Start Date: 5/12/91 Volume of Drilling Fluid Lost (gal.) Volume of Water in Well and Filter Pack (gal.) 3, 0 Start Time: //50 Installed Depth From Top of Well Casing to Bottom of Well: 20' Initial Depth to Water (ft): Initial Depth to Well Bottom: //9.8' Water Level during Initial Pumping/Purging (ft): 9.40 Depth to Water at Termination of Pumping/Purging (ft): 9.8' BEGINNING OF WELL DEVELOPMENT /2/0 3/°C 7.09 460 //6 // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 //// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 /// // 130 350 7.10 290 //// // 130 350 7.10 290 //// // 130 350 7.10 290 //// // 130 350 7.10 290 //// // 130 350 7.10 290 //////////////////////////////////	Project N	ti maatan saa aa	0845		tion Date and T	1	oject: NTC ORIANDO
Well/Site I.D.: Weather: NAVY Well/Site I.D.: Volume of Drilling Fluid Lost (gal.) O Volume of Water in Well and Filter Pack (gal.) O Volume of Water in Well and Filter Pack (gal.) Installed Depth From Top of Well Casing to Bottom of Well: 20' Initial Depth to Water (ft): 9. 40 Water Level during Initial Pumping/Purging (ft): 9. 40 Depth to Water at Termination of Pumping/Purging (ft): 7. 8' TIME TEMP. pH Conductivity Pumping (gal.) 120 31°C 7.04 460 1230 370 7.00 270 1300 32.0 7.10 270 1300 35.0 7.10 270 1330 73.0 7.10 238 0 END OF WELL DEVELOPMENT	Checked	Logged by:	100 1 0 0 1				
Weather: OLO-17-1/18 Weather: A221 Not hand Start Date: 5/1/19- Volume of Drilling Fluid Lost (gal.) O Volume of Water in Well and Filter Pack (gal.) O Installed Depth From Top of Well Casing to Bottom of Well: 20' Initial Depth to Water (ft): Initial Depth to Water at Termination of Pumping/Purging (ft): 9.40 Depth to Water at Termination of Pumping/Purging (ft): 7.8' TIME TEMP. PH Conductivity Pump (gal.) 130 31°C 7.09 130 130 7.10 240 END OF WELL DEVELOPMENT 130 78.0 7.10 238 0 0 0 0 0 0 0 0 0 0 0 0 0	Mark	1				· · · · · ·	
Volume of Drilling Fluid Lost (gal.) O Volume of Water in Well and Filter Pack (gal.) O Volume of Water in Well and Filter Pack (gal.) Installed Depth From Top of Well Casing to Bottom of Well: 20' Initial Depth to Water (tt): 9.40 Water Level during Initial Pumping/Purging (tt): 9.40 Depth to Water at Termination of Pumping/Purging (tt): 9.40 TIME TEMP. pH Conductivity Pumping/Purging (gal.) 1230 37.0 1300 37.0 7.09 1300 1300 7.10 240 1330 7.10 240 1330 7.10 238 O TOP WELL DEVELOPMENT	Finish D	ſ				Weather:	
Installed Depth From Top of Well Casing to Bottom of Well: 20' Initial Depth to Water (ft): 9.40 Water Level during Initial Pumping/Purging (ft): 9.40 Pepth to Water at Termination of Pumping/Purging (ft): 7.50 TIME TEMP. PH Conductivity Pumping (game) 120 130 370 130 370 130 130 130 13	5/12/				hot humid	h924	0LO-17-11B
Initial Depth Tom Top of Well Casing to Bottom of Well: 20' Initial Depth to Water (ft): 9. 90 Water Level during Initial Pumping/Purging (ft): 9. 90 Depth to Water at Termination of Pumping/Purging (ft): 7. 8' Depth to Well Bottom at Termination of Pumping/Purging (ft): 7. 8' Depth to Well Bottom at Termination of Pumping/Purging (ft): 7. 8' Depth to Well Bottom at Termination of Pumping/Purging (ft): 7. 8' Depth to Well Bottom at Termination of Pumping/Purging (ft): 7. 9 1. 10	Finish Ti	1		30			
Initial Depth to Water (ft): 9,90 Water Level during Initial Pumping/Purging (ft): Pyth Depth to Water at Termination of Pumping/Purging (ft): TIME TEMP. pH Conductivity Pump (sa 1300 31°C 7.09 1400 1500 1300	to per all	Asses, may be as and	e signeprotations.		and the second of the second		alled Depth From Top of Well Casing to
### Depth to Water at Termination of Pumping/Purging (#): Py0			- <u></u>			Initial Depth	al Depth to Water (ft):
TIME TEMP. PH Conductivity Pumping/Purging (F):				<i>'</i>	19.8		9.40
Depth to Water at Termination of Pumping/Purging (tt): 9 8 TIME TEMP. pH Conductivity Pump (ga 1230 370 7.09 7.09 7.09 7.09 7.09 7.09 7.09 7.09 7.09 7.09 7.09 7.00 7.0						(ft): 9.40	er Level during Initial Pumping/Purging (
## TEMP. pH Conductivity Pump (ga 1/2/0 3/°C 7.09 960 1/2 1/2/0 3/°C 7.09 960 1/2 1/2/0 3/°C 7.08 370 1/2 1/2/0 3/°C 7.08 370 1/2 1/2/0 1/2/0 3/2/0 7.00 2/2/0 1/2/0 3/2/0 7.10 2/2/0 1/2/0 3/2/0 7.10 2/2/0 1/2/0 3/2/0 7.10 2/2/0 1/2/0	(tt): 198	Pumping/Purging	ination of f	Bottom at Termi	Depth to Well		th to Water at Termination of Pumping/P
## TIME TEMP. pH Conductivity Pump (ga 1/2/0 3/°C 7.09 960 1/2 1/2/0 3/°C 7.09 960 1/2 1/2/0 1/2/0 3/°C 7.08 370 1/2 270 1/2/0 3/5.0 7.10 240 1/2/0 1/	proximate	A a	e Teach a main and g				
BEGINNING OF WELL DEVELOPMENT 12/0 3/°C 7.09 460 18 1230 34.6 7.08 370 1 1300 32.0 7.10 270 1310 38.0 7.12 240 1330 38.0 7.10 238 0	nping Rale	ductivity Pun	Conc	ρH	TEMP.	TIME	•
1230 346 7.08 370 1300 32.0 7.10 270 1310 35.0 7.10 240 1320 38.0 7.12 240 1330 1330 73.0 7.10 238 1	gal/min)	· / / - "	• 4	714	2100	/2 / -	
1300 32.0 7.10. 270 1310 35.0 7.10 240 1320 38.0 7.12 2.40 1330 78.0 7.10 238	gul/min			7.07	<u> </u>	_/2/0	SINNING OF WELL DEVELOPMENT
1310 35.0 7.10 240		3 70 _	·	7.08	34.6	12.30	
1320 38.0 7.12 2.40 6 6 6 6 6 6 6 6 6	02	270		7.10.	32.0	1300	:
1330 73.0 7.10 238 U	0.2	240		7.10	35.0	1310	
END OF WELL DEVELOPMENT 1330 78.0 7.10 238 0	0.2	40	2.	7.12	38.0	1320	
END OF WELL DEVELOPMENT	0.2	7 78	-	-7 .			
NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.)	0.2			1.10	70.0	<u> 1330</u> -	OF WELL DEVELOPMENT -
NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.)							
TO TEO. (Include physical dialactic of femores water, 1) po a series		d.)	er removed	volume of wate	s & size of pump	emoved water No	TES: /lacture physical character of re
							· · · · -
Water is turbed, brown in color Hunda contribujal group (he Hp).		(/2 Hp)	Jung	strifujal	Honda Co	in color.	Water is turbid, brown
Removed = 20 gallons				/			,
Kimou.			•				Kimov. a = Eyero ,

Well Developer's Signature

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Project:	Well installation Date and Time:			i en interna	ACTION OF THE PARTY OF THE PART		Project No.
NTC DRIANDO		Well Development Date and Time:				Logged by: Check	
Well Development Date and Time: NAUY 5/12/98 /340					G. Model		MITal
Vell/Site L.D.:	Weather:					Stan Date:	
OLD-17-12C hazy, hot, humid					5-/12/93 Start Time:		Finish Time
olume of Drilling Fluid Lost (gal.)		Volume of Water in Well and Filter Pack (gal.)				o.	1525
stalled Depth From Top of Well Casing to	Bottom of Well:	27'					
nitial Depth to Water (ft): Initial Depth to Well Softom:							
27'		50'					
ater Level during Initial Pumping/Purging	(ft): 27'						•
epth to Water at Termination of Pumping/F		Depth to Well B	ottom at Termina	stion of	Pumping/P	urging	(ħ):
				_			oroximate
	TIME	TEMP.	pH		ductivity		ping Rate al/min)
EGINNING OF WELL DEVELOPMENT	1355	37.0°C	7-11	_2	65	_0	1.75
	1425	38.0	7.13		80		0.75
:	1440	38.0	7.13-		50		0.75
	1455	38.0	7.13		15		275
	1510	38.0	7.13		38		1.75
ID OF WELL DEVELOPMENT	1525	38.0	7.12		YƏ		0.71
OTES: (Include physical character of r Water is very turbs	emoved water, ty	pe & size of pump,	volume of water	remove	d.)		
Approximately 100)					,		·
·		•				•	
	/	•	1				*

•

and Time: 8/98 if and Time: / 0/5 ell 3-5 nom: 8.60	Termination of 1960	Logged by: 6. Mudd Start Date: 5/8/58. Start Time: /0/5	Project No 25-30 Checked b A. To Finish Dat 5/18/4 Finish Tim //30
10/5 eii 3-5 nom:	Termination of	6. Modd Start Date: 5//8/58. Start Time: /0/5	Checked M. To Finish Dal S/8/4 Finish Tim
10/5 eii 3-5 nom:	Termination of	6. Modd Start Date: 5//8/58. Start Time: /0/5	Finish Da
13.5 nom: 8.60	Termination of	Start Date: 5 / 8 / 5 g. Start Time: / 0/5	Finish Dal
3.5 nom: 8.60	Termination of 1	Start Time: /0/5	Finish Tin
3.5 nom: 8.60	Termination of 1	1015	
tiom: 9.60	Termination of 1	Pumping/Purging	
9.60	Termination of 1	Pumping/Purging	
Market Brown	Termination of 1	Pumping/Purging	,
) Well Bottom at	Termination of 1	Pumping/Purging	
	7 / 6 0		(ħ):
		Ap;	proximate
, рН	d Cond		ping Rate pal/min)
3 5.2	9 3	08	/
35-	85 <u>2</u>	26	<u> </u>
8 5.	90- /	72	/
7 5.	82 /	60	
8 5.	80 /	60 _	/
<u> 5.1</u>	84 _/	56	
	3 5.2 3 5.2 7 5. 8 5. 9 5.	3 5.29 3 3 5.85 2 8 5.90 / 7 5.82 / 8 5.89 / 9 5.89 /	3 5.29 308 3 5.85 226 8 5.90 177 7 5.82 160 8 5.80 160

Project:	Well Instal	Pation Date and Ti	me: <i>D900</i>		Project No. 25 30.6
NTC ONLANDO	Well Deve	iopment Date and		Logged	by: Checked by:
NAVY		5/18/98	215	Start Dai	
VeIVSite I.D.: <i>OLD-17-14C</i>	Weather:	st, homid	: *	5/18/	38. 5/18/9
folume of Drilling Fluid Lost (gal.)		Water in Well	906al	Start Tim	1
nstalled Depth From Top of Well Casing to		48.50	· .		
nitial Depth to Water (ft):	Initial Depa	10 Well Bottom: 48. 70			
later Level during Initial Pumping/Purging	(ft): 6.33				
epth to Water at Termination of Pumping/F		Depth to Well	Sotiom at Termini 48.	ation of Pumping/F	Purging (ft):
	TIME	TEMP.	рН	Conductivity	Approximate Pumping Rate (gal/min)
EGINNING OF WELL DEVELOPMENT	1215	24.3	5-92	328	2.5
	1245	25.5	5.75	250	2.5
:	1250	25.6	5.64-	278	2.5
	1255	21.5	5.64	232	2.1
	1300	25.7	5.64	229	2. 5
ND OF WELL DEVELOPMENT	1305	269	5.40	229	2,5
OTES: (Include physical character of r	emoved water, h	pe & size of pump	, volume of water	removed.)	Mons will
Turbidity >200 C	howalast be	NIMB.	or posty	M / 6) 941	ions wife
Honda 1/2 Hp, Ct	MINITUSUI	/ /			
•					
					•

Well lock	Pation Date and Ti	me:	A CONTRACTOR OF THE PROPERTY O	Project
Weii hiz 22	4/29/98	1400		0253
Well Deve	lopment Date and	Time:	Logged	by: Checke
	5/13/98	1240	G.MVO	
Weather:		er Miller en Aren.		, t ,
	Water in Well Pask (gal.)	40		
to Bottom of Well:	17 /		rmines and supplied by	A Section of the sect
Initial Dest	n to Well Bottom:	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
	4	70'		
ig (ft):		Programme State of the State of	Mark of Constraint and Constraint	
	Death to Well	Sottom at Termin	ation of Pumping/a	Puraina (ft):
3.05	Берано		11.70	
		and the second s	eternologi en televistepagalaser (1 e.e., 14 j. e. e. e.e.	
				Approximat
TIME	TEMP.	ρΗ	Conductivity	Pumping Ra
_	750	<u>.</u>	1117	(gal/min)
1293		<u>_7.13</u>	<u></u>	0.75
1300	274	7.13	137	0.75
-				0.71
	11.0			
1370	216	7 //	119	カラー
1320	26.6	7.11_	119	0.71
1330	26.5	<u>7:11</u> 7:11	119	
				0.75 0.75
	Well Insta Well Deve Weather: Adf Volume of and Filter it to Bottom of Well: Initial Depart	Well installation Date and Ti 4/29/98 Well Development Date and 5//3/99 Weather: hof, homid Volume of Water in Well and Filter Pack (gal.) to Bottom of Well: // Initial Depth to Well Bottom: // // // // // // // // // /	Well Installation Date and Time: 4/29/98 Well Development Date and Time: 5/13/98 /240 Weather: /// Volume of Water in Well and Filter Pack (gal.) Initial Depth to Well Bottom: /// 70' g (ft): 7./0 Purging (ft): TIME TEMP. pH /245 25.9 7./3	Well Development Date and Time: Start Date Start Date

Malo Justan

	May Wash	אליוניולה (ני) דוכו	RECORD		The state of the s	
Project:	Well Insta	Itation Date and Tin		And the second s		ect No.
NTC ORLANDO		4/29/98	1410	()		5-30.0°
Client:	Well Deve	lopment Date and	Time: 1405	Logged	I by: Che	Tolar
NAVY	5/	1/3/98	703	Stan Da		sh Date:
Well/Site I.D.: OLD-/7-/6B	Weather:	+ humid		5-/13		/13/98
		Water in Well		Start Tir	ne: Finis	sh Time:
Volume of Drilling Fluid Lost (gai.)		Pack (gal.)	2.24	140.		450
Installed Depth From Top of Well Casing to	Bottom of Well:	20.5'				
Initial Depth to Water (II):	Initial Depart	n to Well Bonom:				
5.60'		19.6	ere escali	*	the second terms of the second	
Water Level during Initial Pumping/Purging ((ft): 5.6'				,	
Depth to Water at Termination of Pumping/P		Depth to Well E	Sottom at Termin	ation of Pumping	Purging (ft):	
					Approxim	
•	TIME	TEMP.	ρН	Conductivity	Pumping : (gal/mii	
	1405	25.6	7.14	245	(922	· - ,
BEGINNING OF WELL DEVELOPMENT .						
	1425	27.8	7.13	220		. Joan w
	1.125	251	7.12.	189	/	
÷ .	1435	25.6	1-/2:			-
	1440	25.1	7.12	175		
•						
	1445	25.6	7/2	170		
	1450	25.7.	7.12	168	/	
END OF WELL DEVELOPMENT			1.1 4			
NOTES: (Include physical character of re	emoved water, by	pe & size of pump.	volume of water	removed.)		
Water highly turbe	id. Honde	a hope	ump (cent	ritual).		
. ,			/			
Almored 60 pa	lons.		. ,	•		
-						
•						
		•				
		11				
Well Developer's Signature		Mark C	Idas			
Well Developers Signatura						

•

Well Inst	allation Date and T	A PARK Control of the		Project
1 11 11 6	9/30/98			025
Well Dev	. , /		1	
Weather				
		1	5/13/	. 1 .
Volume o	! Water in Well	7.5	Start Tin	
to Bottom of Well:	49'			
Initial Dep	n to Well Bottom:			
ng (ft):			***	
	Control of the Contro			<u>.</u>
	Depth to Well	Sotiom at Termin	ation of Pumping/I	Purging (ft):
	the second secon			i i i
***	75179	-11	On and art to	Approximate
TIME	IEMP.	рн	Conductivity	Pumping Rate (gal/min)
/200	27.1	7.14	152	2
1210	27.0	7./5	141	2
		7.14	14	2
		714	175	2
1275		1.//		
				
1230	25.6	7.14	142	2
	Weather: Mazy Volume of and Filter Ito Bottom of Well: Initial Dep Og/Purging (ft): 5-60 TIME 1200 1200 1200	Well Development Date and S/13/98 Weather: hazy hot humid Volume of Water in Well and Filter Pack (gal.) Initial Depth to Well Bottom: 49.0 cyPurging (ft): 3.30 cyPurging (ft): Depth to Well 5.60 TIME TEMP. 120 27.1 120 27.0 1220 26.2	Well Development Date and Time: 5/13/98 //25 Weather: hazy hot humid Volume of Water in Well and Filter Pack (gal.) 7-5 Ito Bottom of Well: /// Initial Depth to Well Bottom: /// /// /// TIME TEMP. pH /// /// /// /// /// /// ///	Well Development Date and Time: Volume Very Very

Marke Tilm

Cilient: Well Development Date and Time: Well Development Date and Time: Sum Date: Firish Date Initial Depth to Water in Well Date to Well Bonom: Sum Date: S	Project:	Well install	ation Date and Tin	me: ///	Translativ zmet opene odnig	Project No. – Z530.
Weather (1): Weather (1): Weather (2): Weather (3): OLD -17-18 A. Weather (3): OLD -17-18 A. Weather (3): Volume of Orilling Fluid Lost (gal.) Installed Depth From Top of Well Casing to Bottom of Well: Installed Depth to Water (ft): (A. Yo Water Level during Initial Pumping/Purging (ft): (B. YO Water Level during Initial Pumping/Purging (ft): (C. YO Depth to Well Bottom at Termination of Pumping/Purging (ft): TIME TEMP. pH Conductivity Pumping Rate (galmin) 1300 34.9 5.76 300 4 1320 34.9 5.77 300 4 1320 34.9 5.78 250 4 1320 1340 34.9 5.78 250 4 Conductivity Pumping Rate (galmin) 1350 34.9 5.78 250 4 Conductivity Pumping Rate (galmin) 1350 34.9 5.78 250 4 Conductivity Pumping Rate (galmin) 1320 34.9 5.78 250 4 1320 1340 34.9 5.78 250 4 1320 1340 34.9 5.78 250 4 1320 1340 1351		14/-# O	11 701.3	Time:	Loope	
Weather: OLD - 17 - 18 A		Well Devel	5/19/98		(<u>_</u>	· / / / / /
Volume of Drilling Fluid Lost (gal.) Volume of Drilling Fluid Lost (gal.) Volume of Water in Well And Fliter Flork (gal.) O Notice of Water in Well And Fliter Flork (gal.) Installed Depth From Top of Well Casing to Bottom of Well: (a. 40) Installed Depth to Water (ft): (b. 40) Water Level during initial Pumping/Purging (ft): (c. 40) Depth to Water at Termination of Pumping/Purging (ft): Depth to Water at Termination of Pumping/Purging (ft): TIME TEMP. pH Conductivity Pumping Rate (galmin) 1300 344 588 250 4 1320 369 592 180 4 1340 318 6-06 200 4 END OF WELL DEVELOPMENT 1355 33.5 6-06 200 4 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turbidity 25 galloss With Handa 12 lby, contacting of 1949.		Weather				ate: Finish Date;
Volume of Drilling Fluid Lest (gal.) Volume of Water in West and Filter Pack (gal.) Volume of Water (tal.) Volume of Water (gal.) Volume of Water (gal.) Installed Depth From Top of Well Casing to Bottom of Well: 2,5'			ot, humis	·	5/	
Initial Depth to Water (t): (6.40 Water Level during Initial Pumping/Purging (ti): (6.40 Water Level during Initial Pumping/Purging (ti): Depth to Water at Termination of Pumping/Purging (ti): TIME TEMP. pH Conductivity Pumping Rate (galmin) 300 27.7 5.76 300 /// /// /// /// /// /// //	Volume of Drilling Fluid Lost (gal.)	Volume of	Water in Well	12		
Water Level during Initial Pumping/Purging (ft): C-40 Depth to Water at Termination of Pumping/Purging (ft): TIME TEMP. PM Conductivity Approximate Pumping Pate (gal/min) 1300 29.7 5.76 300 1310 38.9 5.88 250 9 1320 36.9 5.92 190 9 1340 36.9 1340 26.06 200 9 END OF WELL DEVELOPMENT 1355 37.5 6.16 200 9 END OF WELL DEVELOPMENT 1355 37.5 6.16 200 9 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turbidity 200 chorolate brown in Color. Purgual 25 gallars With Harda 16 lbp., contribusal. Juny.	Installed Depth From Top of Well Casing to	Bottom of Well:	17.5			
Water Level during Initial Pumping/Purging (II): Depth to Water at Termination of Pumping/Purging (III): TIME TEMP. pH Conductivity Pumping/Purging (III): BEGINNING OF WELL DEVELOPMENT 1300 29.7 5.76 300 1310 39.9 5.83 250 1320 36.9 5.92 190 1340 36.8 6.06 200 1340 36.8 6.14 200 END OF WELL DEVELOPMENT 1355 33.5 6.16 200 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turk dith > 200 chorolate brown in Color. Pumping 25 gallars Wift Handa 16 lbp., Contribusal pump.	Initial Depth to Water (ft):	Initial Depar	to Well Bottom:			
Depth to Water at Termination of Pumping/Purging (th): TIME TEMP. pH Conductivity Pumping/Purging (th): TIME TEMP. pH Conductivity Pumping Rate (gal/min) 13/0 3/4 5.83 250 4 1320 36.9 5.92 190 4 1330 36.8 6.06 200 - 1 1340 36.8 6.14 200 - 1 END OF WELL DEVELOPMENT 1355 33.5 6.16 210 4 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turk dity > 200 character for contracting a contracting of pump.			11.5'			
TIME TEMP. pH Conductivity Pumping Rate (gal/min) 1300	Water Level during Initial Pumping/Purging (n): 6-40				
TIME TEMP. pH Conductivity Pumping Rate (galmin) BEGINNING OF WELL DEVELOPMENT 1300 29.7 5.76 300 1310 34.4 5.88 250 4 1320 36.9 5.92 180 4 1330 36.8 6.06 200 4 1340 36.8 6.14 200 4 END OF WELL DEVELOPMENT 1355 33.5 1.16 210 4 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turb dip >200 chorolate brown in color. Pumped 25 gallas With Howa 16 thp, contribugal pump.	Depth to Water at Termination of Pumping/P	urging (tt):	Depth to Well	Bottom at Termina	tion of Pumping	g/Purging (ħ):
BEGINNING OF WELL DEVELOPMENT 1300 29.7 5.76 300 37.9 1310 37.9 5.88 250 9 1320 36.9 5.92 190 9 1330 36.8 6.06 200 9 1340 36.8 6.14 200 9 END OF WELL DEVELOPMENT 1355 33.5 6.16 2/0 9 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turbidity > 200 charolate brown in color. Pungul 25 gallous with Handa 1/2 thp , contribugal pung.				t est un	the thirty and a second	
BEGINNING OF WELL DEVELOPMENT 300 29.7 5.76 300 (gal/min)						Approximate
BEGINNING OF WELL DEVELOPMENT /300 29.7 5.76 300 .9	•	TIME	TEMP.	ρН	Conductivity	
1310 344 5.88 250 4 1320 36.9 5.92 190 4 1330 36.8 6.06 200 4 1340 36.8 6.14 200 -4 END OF WELL DEVELOPMENT NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turbidity > 200 chorolate brown in color. Purpul 25 gallous With Handa 1/2 lbp, contribused pump.		1300	197	5-71	700	(Gaviiii)
1320 36.9 5.92 190 .4 1330 36.8 6.06 200 .4 1340 36.8 6.14 200 .4 1355 33.5 6.16 210 .4 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turkidity >200 chorolate brown in color. Punged 25 gallous with Handa 1/2 lbp, contribugal pung.	BEGINNING OF WELL DEVELOPMENT	7,500				
1330 368 6.06 200 4 1340 368 6.14 200 -4 1355 33.5 6.16 210 4 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turkidity >200, chorolate brown in color. Purped 25 gallous with Horala 1/2 by, contrifugal. purp.		/3/0	34.4	5.88	250	
1340 368 6.14 200 -4 1355 33.5 6.16 210 4 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turkidity > 200, chorolate brown in color. Purped 25 gallous with Handa 1/2 the contribugal purp.	:	1320	36.9	5.92	190	<u>.</u> <u>.</u> <u>.</u> <u>.</u>
1340 368 6.14 200 -4 1355 33.5 6.16 210 4 NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turbidity > 200, chorolate brown in color. Purped 25 gallous with Horda 1/2 the, contribused, purp.		/330	36.8	6-06	200	
NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turbidity > 200, chorolate brown in color. Purped 25 gallous with Horda 1/2 ltp, contrifugal purp.		1340	368	6.14	200	
NOTES: (Include physical character of removed water, type & size of pump, volume of water removed.) Turbidity > 200, chorolate brown in color. Purped 25 gallous with Horda 1/2 ltp, contrifugal pump.	·	1355	33.5	6.16	2/0	
Turbidity >200, chorolate brown in color. Punged 25 gallous with Honda 1/2 ltp, contrifugal pung.	END OF WELL DEVELOPMENT					
with Horda 1/2 the centrifical jung.						Mous
						J
	with Homea /2	the cen	tritugal /	Jusy.	•	
	•	•	·	,		
	•					
						•
			1		7	To the second se
Male C/colan			Mh le	1 apla		

Project: NTC ORLANDO	Well Instal	Nation Date and Til	ne: ///5	The second se	Project N 2530
Client:	Well Deve	iopment Date and	Time:	Logged	
NAVY		5/19/98	1015	G. Mu	
Vel/Site I.D.: 010-17-19B	Weather:	hunid		Stan Da	/ / /
olume of Drilling Fluid Lost (gal.)		Water in Well	5	Start Tin	
stalled Depth From Top of Well Casing to	Bottom of Well:	30.51			
itial Depth to Water (it):	Initial Dept	n to Well Bottom:			Control or wife more from eq. (
6.20		29.6'			
later Level during Initial Pumping/Purging	(tn): 6.20				•
epth to Water at Termination of Pumping/F		Depth to Well 8	Sottom at Termina 29. 6	tion of Pumping/l	Purging (#):
					Salt Services and Services
	TIME	TEMP.	рН	Conductivity	Approximate Pumping Rate (gal/min)
EGINNING OF WELL DEVELOPMENT	1015	33.2.	6.33	300	.66
The first of the first of the second tracks and the second tracks are second to the second tracks and the second tracks are second to the second tracks are second t	. 1030	299	5.98	380	.66
· · · · · · · · · · · · · · · · · · ·	1045	28.1	C.31-	305	-66
	1100	290	6.30	350	66
	1115	293	5.80	330	.66
ND OF WELL DEVELOPMENT -	1130	28.8.	5.81	3/0	-66
OTES: (Include physical character of re					1 <i>6</i> ° 4
Water is very to	rbid (>2	00). frup	red 5 5 ga	lous with	Horda
centritugal 1/2 Hp	pung.				
, .	•				
•					

	Way billion	AN (O) SYMBYA	r record		
Project:	Well Insta	Sation Date and Ti	me:		Project No. 25 30.
NIC ORLANDO	Well Deve	S/Y/97 Deprent Date and	09/0 Time:	Logged	
Client: NAVY	Trea Deve	5/18/98	1410	G. Mus	
Well/Site I.D.:	Weather:	+ himid	•	Stan Dai	le: Finish Date:
OLD-17- ZOC olume of Drilling Fluid Lost (gal.)	Volume of	Water in Well Pack (gal.)	9.5	Start Tim	ie: Finish Time:
nstalled Depth From Top of Well Casing to		52.5'			
nitial Depth to Water (tt): Y. 85	Initial Dept	5/. 6			
Vater Level during Initial Pumping/Purging ((t): 4.95				
epth to Water at Termination of Pumping/P	urging (ft):	Depth to Well	Bottom at Termin.	ation of Pumping/F	Purging (ti):
		1.78			
	TIME	TEMP.	ρΗ	Conductivity	Approximate Pumping Rate (gal/min)
EGINNING OF WELL DEVELOPMENT .	1410	28.5	5.82	360	
	1435	27.5	5.38	275	
: .	1445	27.6	5.34.	210	3
•	1455	27.3	5.32	200	
	1505	27.4	5.32	192	
ND OF WELL DEVELOPMENT	1515	27.3	5.31	190	3
:					
IOTES: (Include physical character of r					- 1/2
Water turbil, chu	riolate pi	NWN IN CO	olar. Lou	yea 165	garions
with centrifysa.	1 Honda	he the for	P.		
J .		,			
•					
					•
			-		
					Assessed to the second

	WOLLDIN	MYCHARIA OF K	RECORD				
Project:	Well instal	ation Date and Tin		a secondo de competito		iai makalaisisisi	Project No.
NTC ONLANDO		5/5/98	0850		,		25 30.
Client:	Well Devek	5/20/98	Time: 0945	2.7984.2	Logged G. Mus		Checked b
Well/Site I.D.:	Weather:	1/10/13			Start Dat	e: ,	Finish Date
02017-218	K	ot hund				0/98	5/20/
Volume of Drilling Fluid Lost (gal.)	Volume of V	Valer in Well ack (gal.)	2.5		Start Time		Finish Time
Installed Depth From Top of Well Casing to	Bottom of Well:	20.5'	Park and park and a second			3.	
Initial Depth to Water (ft):	Initial Depth	to Well Bottom:					
8-85		198'				, , , , , , , , , , , , , , , , , , ,	
Water Level during Initial Pumping/Purging	(h): 885						
Depth to Water at Termination of Pumping/	Purging (#):	Depth to Well B	ottom at Termina	ation of	Pumping/P	urging	(ħ):
			· · ·				es in the subject
							oroximate
·	TIME	TEMP.	рН	Cont	ductivity		ping Rate al/min)
BEGINNING OF WELL DEVELOPMENT	0945	27.5	6.68		190		, 3
and the second of the second o	. 1000	26.5	<u> 5.23</u>	Sharek s was	30	Solta Decid	3
:	1015	26-0	5.38.	2	20		. 7
	1030	27.9	5.49	2	25		3
	1045	28.0	5.64	2	35		3
	1100	77.7	5.64	. 2	10		3
END OF WELL DEVELOPMENT	<u> //00</u> .	<u> </u>	<u> </u>		./ -		
NOTES: (Include physical character of a	_						_
Water is very	turbed (.	> 200). P	urged 4	5 ja	llono	wi	L
Horda centrafi	yar 12 mg	, sung		•			
•							•
		_					
		1/1/10	Tolar				
Well Developer's Signature		a Jude C.	- 1 ollar				

-	WELL STREET	স ু(€) নিগ্রস্	FRECORD		
Project:	Well install:	ation Date and Til			Project No.
NTC ORLANDO		5/5/97	0920	11	25-30.6 by: Checked by:
Client:	Well Devok	pment Date and	Time: //50	Logged G. Mus	نسسد ایک
NAVY	Jakon thom	120/78	,,,,,	Start Dat	Name and Address of the Owner, where the Party of the Owner, where the Party of the Owner, where the Owner, which is the Owner, which
Well/Site I.D.: 0LN-17- 22C	Weather:	hot humid	/.	5/20/	
	Valuma at V	Valer in Well	· ·	Start Tim	
Volume of Drilling Fluid Lost (gal.)	and Filter Pa	ack (gal.)	8.0	1150	1300
Installed Depth From Top of Well Casing to	Bottom of Well:	48.5			
Initial Depth to Water (ft):	Initial Depm	to Well Bottom:			
5.20	1	7.5			
Water Level during Initial Pumping/Purging	(h): 5.20				
Depth to Water at Termination of Pumping/P		Depth to Well	Sottom at Termina	ation of Pumping/P	urging (It):
	>,70		7 /-)		
·					
		•			Approximate
•	TIME	TEMP.	ρН	Conductivity	Pumping Rate
	//-	30.4	5.98	1200	(gaVmin)
BEGINNING OF WELL DEVELOPMENT	1150		7:10	7200	
	. /2/0	29.5	5.68	410	1
	1210				
:	/2 30	293	5.44-	265	
		28.9	5.41	235	
-	1240	20-1	7:11		
and the second of the second o	1250	28.9	5.38	2/0	
	1300	28.9	5.32	200	,
END OF WELL DEVELOPMENT					
NOTES: (Include physical character of re	emoved water. No	e & size of pump.	volume of water	removed.)	
Water is very turbe	1 ()2001	vru) Pi	word /c	10 gallors	wish
Water is very curve	0. (200)	-/). / 0	in the second		-
Honda centrifuga	1/2Hp	pung.			
110 400 00 1				•	
•			-		
		_			
			/	<i>;</i> 2	- 4
		1/1/2/1	Clasa		

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	WOLLD	13(0) 3(13()	record		
Project:	Well Insta	Sation Date and Ti	me: /230	The second secon	Project N 25 30
Client:	Well Deve	iopment Date and		Logged	
NAVY		5/21/98	1215	6-MU	dd M.To
Well/Site I.D.:	Weather:	had I :		Stan Dai	
0L0-17-23A	Nolume of	MOT, humia Water in Well	<u> </u>	5/2/ Start Tim	98 5/2/ 1e: Finish T
Volume of Drilling Fluid Lost (gal.)	and Filter		2	1215	·
Installed Depth From Top of Well Casing to	Bottom of Well:	12'	Participation of the Control of the		
initial Depth to Water (ft):	Initial Dept	n to Well Bottom:			
3.17		11.9			
Water Level during Initial Pumping/Purging	(h): 3-2			en formalista.	•
Depth to Water at Termination of Pumping	Purging (ft): 3.4	Depth to Well	Bottom at Termina	tion of Pumping/F	Purging (tt):
					ar yar wat ine
					Approximate
•	TIME	TEMP.	pH *	Conductivity	Pumping Rate (gal/min)
BEGINNING OF WELL DEVELOPMENT	1215	27.6	6-09	340	>200
SEGMANG OF WELL DEVELORMENT		27.1	6.04	275	> 2 ~ ~
•	1230	21.1			
:	1240	27.4	5.94.	298	> 200
	1250	26.8	6-07	3/8	>200
				277	.
	1700	26.0	6.07	272	>200
	<u>1300</u>	26.0	<u>6.0)</u>	760	>200

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	PE(TRAIGN	AST (D) SYLLSIVI	r record		
Project: NTC ONLAWDO	Well instal	Station Date and Till	me: //40		Project No. 2530.C
Client: NAVY	Well Deve	ippment Date and 5/2//98	Time: /335	Logged to	T Grey M.
Well/Site I.D.: 0LD-17-24B	Weather:	+, muid		Stan Date	98 5/21/90
Volume of Drilling Fluid Lost (gal.)	Volume of and Filter F	Water in Well Pack (gal.)	4	Start Time	استعاده است
Installed Depth From Top of Well Casing to I		24.5			
Initial Depth to Water (ft):	Initial Dept	74-5			
Water Level during Initial Pumping/Purging (I	1): 5.20				•
Depth to Water at Termination of Pumping/Po	urging (tt): 5-2 d	Depth to Well	Sottom at Termina 24.5	ation of Pumping/P	urging (tt):
•	TIME	TEMP.	рН	Conductivity	Approximate Pumping Rate (gal/min)
BEGINNING OF WELL DEVELOPMENT	1335	28.3	5.84	260	
<u>.</u>	1350	27.5	5.71	270	
: _	1405	27.2	5.74 -	220	
.· -	1415	275	5-67	200	
_	1/25	27.3	5.69	200	
END OF WELL DEVELOPMENT -	1435	27.3	568	202	
NOTES: (Include physical character of re	moved water N	⇒e & size of pump.	volume of water	removed.)	
Turbidity >200, C					Mons with
Honda 1/2 H					
, , , , , , , , , , , , , , , , , , ,			/		
·					
					•
					for any
Well Developer's Signature	<u> Ma</u>	I Tale			
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Project: NTC ONLANDO Client: NAVY Well/Site I.D.: OLD - 17-25C Volume of Drilling Fluid Lost (gal.) — 10 Installed Depth From Top of Well Casir Initial Depth to Water (ft): 240	Well Devel Weather: Yolume of and Filter Fing to Bottom of Well:	Water in Well	1015	Logged to C. Mo. Start Date 5/2// Start Time // 05	Project No. 2530.0 Oy: Checked by M. Todd a: Finish Date: 99 5/21/9
Client: NAVY Well/Site I.D.: OLD - 17-25C Volume of Drilling Fluid Lost (gal.) = 10 Installed Depth From Top of Well Casin Initial Depth to Water (ft):	Weather: Major Volume of and Filter F	121/98 thumid	Time: //05	Start Time	checked by M. Jode Finish Date: 99 5/2//9 First Time:
Well/Site I.D.: OLD - /7 - 25 C Volume of Drilling Fluid Lost (gal.) — /O Installed Depth From Top of Well Casir Initial Depth to Water (ft):	Weather: Major Volume of and Filter F	121/98 thumid	1105	Start Time	ald M- Toda 3: Finish Date: 99 5/2//9 6: Firstsh Time:
OLD - 17-25C Volume of Drilling Fluid Lost (gal.) - 10 Installed Depth From Top of Well Casin Initial Depth to Water (ft):	Volume of and Filter Fing to Bottom of Well:	t humid		Start Date 5/2//	Finish Date: 99 5/2//9 Finish Time:
OLD - 17-25C Volume of Drilling Fluid Lost (gal.) - 10 Installed Depth From Top of Well Casin Initial Depth to Water (ft):	Volume of and Filter Fing to Bottom of Well:	Water in Well	~ 7	5/2// Start Time	99 5/2//9 1: Finish Time:
Volume of Drilling Fluid Lost (gal.) // Colored Promise Top of Well Casing Initial Depth to Water (ft):	Volume of and Filter Fing to Bottom of Well:	Water in Well	~ 7	1	Finish Time:
Installed Depth From Top of Well Casin	ng to Bottom of Well:	63.5		1/1/5	1/30
Initial Depth to Water (ft):		635			
	Initial Dept				
29.0	l '	to Well Borrom:			(4) (4) (4) (4) (4) (4)
		64.0			
Water Level during Initial Pumping/Purg	ging (ft): 24.1	The Committee of the Co	the state make the kinds policions stall west there is a 100	And the state of t	e de la companya de l La companya de la companya de
Septh to Water at Termination of Pump		Depth to Well	Sottom at Terminat	ion of Pumping/P	urging (#):
	29.7			640	The state of the s
•					
		* E\17	a Lif	Conductivity	Approximate Pumping Rate
	TIME	TEMP.	рΗ	Conductivity	(gal/min)
BEGINNING OF WELL DEVELOPMEN	NT 1105	29.5	10.47	1650	7200
	1/20	28.9	9.83	1300	7200
:	1135	28.7	10.41-	950	>200
	1150	285	10.42	780	7200
ND OF WELL DEVELOPMENT		-			
NOTES: (Include physical characte	r of removed water, ty				

and the control of th

	WOLL DIE	तें अर्थ () ते प्राजित	r record		
Project:	Well Insta	viation Date and Ti	me:		Project No.
NIC DRIANDO		5/5/98	14/0	.	2530.
Client:	Well Deve	iopment Date and	Time: /340	Logged	
MANY	Weather:	5/20/98	1 3/5	M. Tag Start Dat	
Well/Site I.D.: 0CD-17-26A	Treation.	hot hunid		5/5/3	11. 5/5/98
Volume of Drilling Fluid Lost (gal.)		Water in Well Pack (gal.)	~ 15	Start Tim	
Installed Depth From Top of Well Casing to	Bottom of Well:	_			
Initial Depth to Water (It):	Initial Dep	n to Well Sottom:			•
2-25		12.5	·		
Water Level during Initial Pumping/Purging	1.1.5		: 1		
Depth to Water at Termination of Pumping/F	Purging (tt): Z. 25	Depth to Well	Bottom at Termina / 2.)	tion of Pumping/F	orging (It):
					Approximate
•	TIME	TEMP.	ρН	Conductivity	Pumping Rate (gal/min)
BEGINNING OF WELL DEVELOPMENT	1340	27.7	5,99	390	
	. 1400	25.9	6.68	375	
:	1420	27.4	6.63.	345	
	1435	27.1	6.67	370	
	1445	26.7	6.77	370	
	1450	26.3	6-82	370	- J
END OF WELL DEVELOPMENT					
NOTES: (Include physical character of r	emoved water, h	ype & size of pump	, volume of water	removed.)	
Turbid was	ter brow	n in Colo	7. Pury	uf 175	gallers
Honda	he to con	trifugal su	ma l.m. ()	101	
		1 July per	y wis a	rea:	
		·			
		//	/	1	
Mail Davidage de Cination		Mas	1.6 / A	-	. 1.
Well Developer's Signature					

	WALDE	गुळ १०) धुरु । अरु	T RECORD		
Project: NTC DALANGO	i	Sation Date and Ti	me: / / 7	y f	Project No 2530
Client:	Well Deve	iopment Date and	Time: 6945	Logged	by: Checked
Well/Site I.D.:	Weather:	5/2/198	Start Dai	odoro G. M. Is: Finish Da	
OW-17-27B	1 ' .	ot humin		5/5/	88. 5/5/
Volume of Drilling Fluid Lost (gal.)	Volume of and Filter I	Water in Well Pack (gal.)	terminal of the state of the st	Start Tim	e: Finish Tin
Installed Depth From Top of Well Casing to	Bottom of Well:	0.0	to the second way the second		the first of the first of the
Initial Depth to Water (ft):		n to Well Bottom:			
Water Level during Initial Pumping/Purging	(h): 2.94		the state of the s		
Depth to Water at Termination of Pumping/		Depth to Well	Bottom at Termina	ation of Pumping/F	urging (#):
-	TIME	TEMP.	рН	Conductivity	Approximate Pumping Rate (gal/min)
BEGINNING OF WELL DEVELOPMENT	0945	27-2	6.74	405	
	1015	26.6	6.09	370	_/
· •	1030	77.2	6.13-	306	
	1040	27.7	6.09	<u> </u>	
	1050	27.4	6.09	308	
END OF WELL DEVELOPMENT	1100	27.5	6.12	292	
NOTES: (Include physical character of		A			
Very turbed,	silty wat	s - lunge	d 90 ja	don uj we	iter.
Hondalth	Contrapazal	Pury	was used		
· /.	1 1	<i>I</i> .₹.			
•		•			

Well Developer's Signature

Man The

oject:	Well Install	ation Date and Tin	ie:			Project No.	
NIC OPLANDO		5/6/99	1345			2530.6	
ient:	Well Devok	epment Date and 1	ime: 920		Logged by:	Checked by:	
WAVY	Weather:	2411	7.0		Start Date:	Finish Date:	
0LO-17-28C	hot	humid			5/22/9 Start Time:	9 5/22/98 Finish Time:	
lume of Drilling Fluid Lost (gal.)		Volume of Water in Well and Filter Pack (gal.): ~/O Start Time 0920					
stalled Depth From Top of Well Casing t	o Bottom of Well:	3.0			•		
tial Depth to Water (ft):	_	Initial Depth to Well Bottom:					
17.50		63.0					
ater Level during Initial Pumping/Purging	g (h): 17.54	•				,	
pth to Water at Termination of Pumping		Depth to Well E	ottom at Termina 63. 0	tion of P	umping/Purg	ing (t):	
	·					Approximate	
•	TIME	TEMP.	рН	Cond		Pumping Rate (gal/min)	
EGINNING OF WELL DEVELOPMENT	0920	26.4	6-38		160	(900)	
	. 0950	26.4	6-52	3	90	/_	
	1000	26.5	6.48-	39	 -	<i></i>	
•	10/0	26.5	6.50	3	80	/	
	1020	26.4	148		80		
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				180		
	1030	26.7	6.45	5	<del>yo</del> -		

	oject: SITE SCREENING	Point of Interest: 5.A. 17
Sa	roject Number: CTO 107 ample Location ID: 176700101	Date: 5/31/95
Tir	me: Start: 07:43 End:	Signature of Sampler: SRIETEIUS /ISUKIUS
ata	Well Depth 12.74 Ft. Measured Top of Well Historical Top of Protects Casing	Well Riser Stick-up
Water Lovol/Woll Data	Depth to Water 5.12 Ft. Well Martenal: Well Locked?: PVC Yes SS No	Well Dia2 inch
Water	Height of Water Column X	al/Vol Welt Integrity! Yes No Prot. Casing Secure Concrete Collar Intact Cuter
ation	Pursing Samoling Equipment Used:	Decontamination Fluids Used:
Equipment Documentation	Purging Sampling Equipment ID  Penstahic Pump  Submersible Pump  Bailer  PVC/Silcon Tubing  Tetlor/Silcon Tubing  Aurut  Hand Pump  In-line Filter  Press/Vac Filter	( / All That Apply at Location)  Methanol (100%)  25% Methanol/75% ASTM Type II water  Deionized Water  Liquinox Solution  Mexane  HNO-yD.I. Water Solution  Potable Water  None  ACCING+  ISOPICE PIGL
Flold Analysis Data		Sample Observations:  Collected In-line Turbid Clear Cloudy In Container Colored Odor  Sal. © Gal. © Gal. © Gal.  76.0 76.0 76.0 77.0 6.78  BSO. BSO. BSO. BSO. BSO.
ion Requiromonts at the Location)	Analytical Parameter / Il Field Preservation Volume Required  VOA HCL SVOA 40C PessPCB 40C norganics HN0, Explosives 4°C TPH HS0 TOC HS0 Notes:  LCW-FLCW /LKGE  FINAL HIV = 17.8	/ # Sample Sample Bottle IDs Collected

7	Service Services	GROUNDWA	ter sample	FIELDD	ATA	Marty Market part of the New York
Pro	oject: SITE SUREE	HIHG		Point of Int	erest: 5, A. 1 5/31/95	<u>/</u>
Pro	oject Number: CTO	707		Date:	5/31/73	
Sa	imple Location ID: 119	ODZU	20	Cinesture	of Sampler:	MASIA/HAWES
. Tir	me: Start: 10:1/	End: _//.		Signature	or Sampler	4/13/4/////
	Well Depin 12.5 Ft.	Measured  Historical	Top of WellTop of Protectiv Casing	Wet Riser e (from grou		Protective Ft. Casing/Well Difference Protective Ft. Casing
Water Levol/Woll Dat <b>s</b>	Depth to Water 4.63 Ft.	Well Material:  PVC SS	Well Locked?:YesNo	Well Dia.	2 inch 4 inch 6 inch	Water Level Equip, Used:Elect. Cond. ProbeFloar ActivatedPress, Transducer
Water L	Height of Water Column X 7.67 Ft.	16 GaVA. (2 in) 65 GaVA. (4 in) 1.5 GaVA. (6 in) 55 GaVA. (in.)	1 4	aYVol al Gal Purped	Well Integrity: Prot. Casing Secure Concrete Collar Intact Other	Yes No
flon	Puraina:Sa	mpling Equipment Uz	म :		<u>Pecontaminatio</u>	n Fluida Used :
Equipment Documentation	(/ If Used For) Purging Sampling	Penstahic Pump Submersible Pump Bailer PVC/Silicon Tubing Teffor/Silicon Tubing Airth Hand Pump In-line Filter Press/Vac Fizer	Equipment ID		Deionized Williams Solutions Solutions Solutions Solutions Solutions March 1907 I. W. Potable Water None	0%) 5075% ASTM Type II water atter tion atter Solution or  6077
Floid Analysis Data	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (umhos/cm. @ 25 Deg. Oxidation - Reduction, c Dissolved Oxygen, ppm	29.0 6.79 945. C)		Cai. ©	Indine Tuning Colors Co	
Sample Collection Requirements (/ r Required at this Location)	Analytical Parameter / If Finere  VOA SVOA PesVPCB Inorganes Explosives TPH TOC Norate Notes:  LOW-FLO FINAL A	d Mained  HCL  40C  40C  HN0,  4°C  H,50,  H,50,  H,50,		/ # Sample Codested		Ds

;	ect: SITE SCREENING		Point of Inter	est: 5, A, 1	The second of th
	ect Number: CTO 107		Date:	5/31/95	
Sam	ple Location ID: 17600301			0/	. 1 1
Time	e: Start: 10.38 End:	13.00	Signature of	i Sampler: <u>Ste</u> v	h ! line ten
2	Well Depin 12.43 FtHistorical	Top of WellTop of Protec		ck-up <u>O.</u> Fi.	Protective O. Ft. Casing/Well Difference Protective O. Ft.
valer Levouweii Data	Depth to Water 4.25 Ft. Well Material:  PVC SS	Well Locked?: Yes No	West Dia.	2 inch 4 inch 6 inch	Casing  Water Level Equip, Used:  Elect. Cond. Probe  Float Activated  Press. Transducer
151011	16 GaVA(2 Height of Water Column X 85 GaVA(4 <u>876</u> Ft1.5 GaVA(6 <u>- タン</u> GaVA(6	(n) -	C	Vell integrity: Inc. Casing Secure Concrete Collar Intact Juner	Yes No
Loui	Purana Semplina Equipme	nt∪∞d:		Decontamination	Fluids Used :
Equipment Documentation	Purging Sampling  Penstaltic Pump Submersible Pum Baler PVC/Silcon Tubin Tellon/Silcon Tub Ann Hand Pump In-line Filter Press/Vac Fiter	7	(/	All That Apply at Loca Methanol (100) 25% Methanol Deionized Wat Liquinox Soluti Hexane HNO JD.1. Wat Potable Water None ALCOVE	%) 75% ASTM Type II water en er Solution
D 414	Ambient Az VOC ppm Well Mout	and the second of the second	A STATE OF THE STA	lineTurb< ContainerColore	odOdor
riold Allaly Sis Dala	Purpe Data © ZO.  Temperature, Deg. C pH, units Specific Conductivity (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, Jr. mv Dissolved Oxygen, ppm			26.0 26.0 5.93 200	Gal. @ 30. Gal.  26.0  6.06  708.
Aru	•	rvation Volume Ithid Required	✓ 8 Sample Collected	Sample Bottle IDs	
this Location)	VOA HCL SVOA 4CC Pest/PCB 40C ganes HNO, Explosives 4°C IPH HS0, ICC HS0		=		

military of the

D	ject: SITE SCREENING	Point of Interest: 5, 1. 17
	pject Number: CTO 107	Date: 5/31/95
Sar	mole Location ID: 17600401	
	ne: Start: 11:40 End: 13:37	Signature of Sampler: NASH / NAWES
	Well Depth 12.5 Ft. Measured Vop of W	fell Well Riser Stick-up O- Ft. Protective 5. Ft.
	Depth to Water 3.8/ Ft. Well Material: Well Locked?:  PVC Yes SS No	Casing
	Height of Water Column X 18 GaVA. (2 in ) 41.5 GaVA. (4 in.) 1.5 GaVA. (6 in ) 13.5 GaVA. (_in )	GaVVol Well Integrity: Yes No Prot. Casing Secure  Concrete Collar Intact  Ciner
	Puraina Samplina Equipment Used:	Decontamination Fluida Vaed:
	Purging Sampling Equipment I  Penstatic Pump Submersible Pump Bailer PVC/Silcon Tubing Tellor/Silcon Tubing Airlit Hand Pump In-line Filter Press/Vac Filter	ID ( / All That Apply at Location)  Methanol (100%)  25% Methanol/75% ASTM Type II water  Deionized Water  Liquinox Solution  Hexare  HNO JD.I. Water Solution  Potable Water  None  ACCONOX  FSONK OPGE
	Ambient Ar VOC Oppm Well Mouth Oppm Fe	
		3.0 33.0 35.0 35.0 55 6.95 6.57 7.58 6. 350, 350, 550
,	Analytical Parameter / If Field Preservation Volum Filtered Methyd Requi	·
·	VOA         HCL           SVOA         400           PBSVPCB         400           Inorganes         HNO,           Explosives         400	
ol all m	TPH H S0 TOC H S0 Notate H S0  Notate H S0  COM: Front Fire 4 E	

	roject: SITE SCREENING	Point of Interest: S.A. 17
	roject Number: CTO 107	
S	ample Location ID: 1760050/	
π	me: Start: 07:50 End: 10:08	Signature of Sampler: Hur & Grie less
	Well Deptin 12.88 Ft. Weasured Top of We Top of Pro Casing	Wet Riser Stick-up O. Ft. Protective O. Ft. Casing/Well Difference  Protective Ft.
Water Level/Woll Data	Depth to Water 3.66 Ft. Well Material: Well Locked?:  PVC Yes No	Wet Dia. 2 inch Water Level Equip. Used: 4 inch Elect. Cond. Probe 6 inch Pross. Transducer
Water	Height of Water Column X	Gal/Vol Well Integrity: Yes No Prot. Casing Secure Concrete Collar Intact Cther
lon	Purging Sampling Equipment Used:	Decontamination Fluids Used:
Equipment Documentation	Purging Sampling Equipment 10  Penstahic Pump Submersible Pump Bader  PVC/Silcon Tubing Tellon/Silcon Tubing Arint Hand Pump In-line Filter Press/Vac Fizer	( / All That Apply at Location)  Methanol (100%)  25% Methanol/75% ASTM Type II water  Deionized Water  Liquinox Solution  Mexane  HNO / D.I. Water Solution  Potable Water  None  ALCANOT  150 Y LO PC
Data		Data Collected
Floid Analysis Data	Purpe Data © 3.75 Gal © 5.5  Temperature, Deg. C 25.5  pH, unns 6.77  Specific Conductivity 260. 250.  (umhos/cm. Ø 25 Deg. C )  Oxidarion - Reduction, J-mv  Dissolved Oxygen, ppm	
	Chalptical Parameter / If Field Preservation Volume Filtered Method Required	✓ fl Sample Sample Bottle IDs Collected
Sample Collection Requirements (/ I Required at this Location)	VOA         HCL           SVOA         40C           PesuPCB         40C           norganes         HNO,           Explosives         4°C           TPH         H SQ	

3/4/3/3/3		GROUNDWA	TERSAMPL	Point of Inte	rest: 5,2. 17	e y min anna legal (1966) go ag Chimine (1961) ag mhaill ag ag ghaille ag ann bhaill ag an a
Project Project	t:	107		Date:	6/2/95	
Samol	e Location ID: 17	502401			of Sampler: 1	400-
Time:	Start: 12:09	End:	14:00	Signature	of Sampler:	L. CALL.
	Vell Depin <u>463</u> Fl.	Measured Histoncal	Top of Well Top of Prote Casing	Well Riser ! nive (from groun		Protective O Ft. Casing/Well Duterence Protective O FL. Casing
Water Level/Well Dat <b>a</b> I	epth to Water <u>3.92</u> Ft.	Well Material:  PVC SS	Well Locked?: Yes No	Wet Dia	2 inch 4 inch 6 inch	Water Level Equip. Used: LElect. Cond. Probe Float Activated Press. Transducer
Water Le	leight of Water Column X	18 GAVR. (2 in) = 85 GAVR. (4 in) = 1.5 GAVR. (6 in) = GAVR. (_in)	1 <	GaVVol Total Gal Purged	Well Integrity: Prot. Casing Secure Concrete Collar Intact Cuner	Yes No
atlon		mpline Feyipment Uz		langak tegapa lipi - an igua sasa litetegi o -		on Fluids Used :
Equipment Documentation	Purging Sampling	Pensiahic Pump Submersible Pump Baler PVC/Silcon Tubing Tetlon/Silcon Tubing Arim Hand Pump In-line Filter Press/Vac Fiter	Equipment 10		Deionized W Liquinox Sol Hexane HNO JD.I. V Potable Wat None  LLOVIAR	00%) rol/75% ASTM Type II water /ater lution Yater Solution ler
Floid Analysis Data	Purpe Data Temperature, Deg. C pH, units Specific Conductively (umnos/cm. @ 25 Deg. Oxidation - Reduction, Dissolved Oxygen, ppm	ppm Well Mouth	erac .	Cal. © 3 Cal. © 3 Cal. © 3 Cal. © 3	Sample	Gal. @ Gal.
cellon Requirements led a tilk Location)	Notes: Low - Fo			/ # Sample Collected	Sample Bottle	10s

	GROUNDWATER SAMPI	E FIELD DATA
	Project NTC OCLANDO	Point of Interest SA 17 / CLA-17-00/4
	Project Number: 2530,05	Date: 6/17/96
	Sample Location ID: 176-00462	
	Time: Start: 1600 End: 1700	Signature of Sampler: 10 Museum
		A CONTRACTOR OF THE PROPERTY O
	Well Depth 12.5 Pt. Measured 5 Top of Well 5 Historical 7 Top of Prote Casing	Well Riser Stick-up R. Protective R. Casing/Well Difference
Data		ProtectivePL Casing
Water Level/Well Data	Depth to Water 162 PL Well Material: Well Locked?:  PVC  SS No	Well Dia 2 inch
Water	Height of Water Column X	GalVol Well Integrity: Yes No Prot. Casing Secure Concrete Collar Intact Other
Equipment Documentation	Puratna/Sampling Equipment Used:	Decentamination Fluids Used :
를	(/ If Used For)	
Ē	Purging Sampling Equipment ID  Penstakic Pump	( / All That Apply at Location)Methanol (100%)
ž	Submersible Pump	25% Methanol/75% ASTM Type II water
ă	Bailer	Delonized Water
5	Teffon/Silicon Tubing	Hexane
툂	Airfit	HNO y D.I. Water Solution Potable Water
de.	In-line False	None
ш	Proce/Vac Fiter	
		and the company of th
Analysis Data	Arrovent Air VOC ppm Well Mouth ppm Field Dat	Sample Observations: ts Collectedin-lineCloudy
=	Purpe Data @/_ Gal @	GH @ /15 GH @ 215 GH @ 3.5 GH.
<u> </u>	Temperature, Dec. C 26 5 26 3	25.1 25.5 22.0
Ž	Temperature, Deg. C 26.5 26.5 26.5 4.3.2	6,27 6154 6148
	Specific Conductivity 2.5 ( 9.79 (umhos/cm. @ 25 Deg. C.)	3/6
Fleld	Oxidation - Reduction, -/- mv	and the state of t
	Dissolved Oxygen, ppm	A Contract of the Contract of
····	700gg 50c 37.6	- 281 15.8 14.1
=	Analytical Parameter / 2 Field Preservation Volume Filtered Method Required	✓ E Sample Sample Bottle IDs Collected
룓	VOA AGD	- 041 / 1004102
= 3	SVOA	
100 M	inorganics HND,	
n Require the Locaton)	Explosives	
	TOC H.50	
100	Naraze H'50'	
Collection Respective	Notes:	and the second of the second o
<u> </u>		
Sample Collection Requirements (/ # Required a lot Localen)		
77		

		Point of Interest SA-17 / 043-17-064
	Project Project Number Sample Location ID: 1750000 End: 1200	Date: 2/12/97
	Well Dopth A Second C	Top of Well Well Riser Stick-upR. ProtectiveR. Top of Protective (from ground) Casing Well Difference  FLUSH  MOUNT ProtectiveR.  Casing
		Activated to the state of the s
	Height of Water Column XSS GarR. (4 in.) - [ 7 P15 GarR. (4 in.) - [ GarR. (_in.) ]	GalVol Well Integrity: Yes No Prot. Casing Secure Concrete Collar Intact Other
	Poretatic Pamp  Submerality Pamp  Balon  Balon	Decontamination Fluids Used:  (
:	Teflon/Silicon Tubing Airtit Hand Pump In-line Filter Preser/Vac Filter Ambient Air VOC ppm Well Mouth ppr	Sample Observations:
•	Purge Data  Purge Data  Purge Data  Gal C  Purge Data  Temperature, Deg. C  pht, units Specific Conductivity (uminos/cm. @ 25 Deg. C.)  Oxidation - Reduction, of my Dissolved Oxygen, ppm	Container   Colored   Octor
	Analytical Parameter / 2 Field Preservation Netwood  Analytical Parameter / 2 Field Preservation Netwood  Analytical Parameter / 2 Field Preservation Netwood  AC  AC  AC  AC  AC  AC  AC  AC  AC  A	Volume / E Sample Sample Bortle IDs Required Collected  17 / Carl (NOC) (1)

	GROUNDWATER SAMPL	E FIELD DATA
	Project Mumber 2	Point of Interest: 5A 77 90-17-074 Date: 2/12/97
• • • • • • • • • • • • • • • • • • • •	Sample Location 10: 76-8-70/ Time: Start: 12:50	Signature of Sampler:
· · · · · · · · · · · · · · · · · · ·	Well Depth A Seasonal A Top of Well  Visional Top of Proces Casing	
eli Date	Depth to Water 2 7 R. Well Manufall. Well Locked?:	FLUSH MUDOT Protective PL Casing  Well Dia 2 inch
LevelV	<u> </u>	# Sect. Cond. Probe   Sinch   Host Activated
Water	Hoight of Water Calumn X St Carr. (4 in.) -	Mel irregmy: Prot. Casing Secure Concrete Collar Intact Other
tetton	Purolog/Sempling Equipment Used:	Decontamination Fluids Used :
Equipment Documents	Purping Sampling Equipment ID Pointable Pump Submerable Pump Balor	( / All That Apply at Location)  Methanol (100%)  25% Methanol/75% ASTM Type II water  Delonized Water
pment	PVC/Silcon Tubing Teleor/Silcon Tubing Airth Hand Pump	Liquinox Solution  Hexane HNO_DI. Water Solution  Potable Water
Equ	In-line Riser Press/Vac Filter	None Control of the C
2	Ambient Air VOC ppm Well Mouth ppm Field Data	Sample Observations:  CollectedIn-line
Analysis Date	Purge Data  Purge Data  Temperature, Deg. C  pit, units  Specific Conductivity  2	34 • <u>5</u> Gal. •
Fleid	(umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, -/- mv Dissolved Oxygen, ppm	
•	Analytical Parameter / # Field Preservation Volume Required Method Required	/ # Sample Sample Bottle IDs Collected
ulremon	VQA	= <u>17, 5, 007, c1</u> = ',=',=',
Ion Require	Inorganics HND, Explosives 4°C TPM H,SO TCC H,SO	= = '=',=',=',=
ample Collection Requirements (/ # Required at the Localon)	Notes:	
ample 7		

0-	nject Number:	Point of Interest 574-17/0/3-17-08/4 Date: 2/17/97
Tim	ne: Start: // See First / 200	Signature of Sampler:
Water Level/Well Data	Well Depth 19 Water 20 R; Well Massist; Well Lackwell:  Yes	
MARIOL FOADI	SS	Califold Well Integrity: Yet No Proc. Caung Secure Concrete Coller Intact Coner
Equipment Documentation	Purples Semotine Equipment Used 3  (/ If Leed For) Purping Sampling X Perturable Pump Submersible Pump Bailer ; PVCrSicon Tubing X Telenrisition Tubing Airth Hand Pump In-line Filter Press/Vac Filter	Decontemination Fluids Used:  [ / All That Apply at Location]  Methanol (100%)  _25% Methanol/75% ASTM Type it water Delorized Water Liquinor Solution  Hexame HNO_/D.I. Water Solution Potable Water None
	Ambient Air VOC ppm Well Mouth ppm Field C	Sample Observations:  Data Collected In-line Cloud In Container Colored Odor
3		X II COMMINGCOOL
Analysis	Purge Data © 3 Gal © 4  Temperature, Deg. C 24  pH, units Specific Conductivity (umhos/cm. @ 25 Deg. C.) Oxidenen - Reduction, 4- mv Dissolved Oxygen, ppm	Cal • 5 Cal • Cal • Cal
Analysis	Temperature, Beg. C 24 24 24 24 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	Cal • 5 Cal • Cal
Fleid Analysis	Temperature, Beg. C 24 24 24 24 24 24 24 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	Gal. © Gal. © Gal. © Gal.  Gal. © Gal. © Gal.  Sample Sample Bettle IDe Collected
Holl mequirelibring	Temperature, Deg. C. pH, units Specific Conductivity (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, of my Dissolved Oxygen, ppm  TIAPIS 117	Gal. © Ga

	GROUNDWATER SAMPLE	
	Project: NTZ ORLANDO	Point of Interest 54-17 / 013-17-091
	Project Number: 2530.05	Date: 2/12/97
	Sample Location ID: 17/5009 01/17/500901	200
	Time: Start: 1520 End: 1930	Signature of Sampler:
	Well Depth _//_ PtMeasured Top of Well	Wet Riser Stict-up R. Protective R.
	✓ Historical  ✓ Top of Protecti	we (from ground) Casing/Well Ofference
_	Casing	AUCH-MOINT
=		PICIECTA
9	2.2	MICHSLIELL Coung
3	Depth to Water <u>39</u> Pt. Well Massviat Well Locked?:	Well Die 2 inch Water Level fiquip. Used:
Ş		4 inch X Bect. Cand. Probe
. \$		Procs. Transducer
Water Level/Well Data		
딑	×.18 GWR. (2 in) - 2 a	AfVol Well Integrity: Yes No
₹	Height of Water Column X 85 Gal/R. (4 in.) -	Prot. Casing Secure
	7 PL	al Gal Purged Concrete Coller Intent
=	Puroing/Sampling Equipment Used:	Parameter Parameter at a constant of the const
Equipment Documentation	- A STATE OF THE S	Pacentamination Fluida Used :
쿹	(/ If Used For)	
Ē	Purging Sampling Equipment ID	( All That Apply at Location)
Ş	Submersible Pump	Methanol (100%)25% Methanol/75% ASTM Type II water
ద్ది	Saler	Delonized Water
Ē	PVC/Silicon Tubing	Liquinor Solution Herane
Ě	Airtin	HNO /D.1. Water Solution
킄	Hand Pump	Company Potable Water  None
蓝	Proce/Vac Filter	
		Sample Observations:
_	Ambient Air VOC ppm Well Mouth ppm Field Date	Colored In-line Close Cloudy
=		in Container Colored Odor
Analysis Data	Purge Data 0 2 Gal 0 2.5 G	ra 6 3 Cal 6 Cal 6 Cal
=		
=	Temperature, Deg. C 25.c pH, units	- 25c
	Specific Conductively 35/2 363	3/10
Fleid	(umhas/cm. @ 25 Deg. C.)	
	Oxidation - Reduction, -/- mv Disserved Oxygen, ppm	
,	720 20x	7200
	Analytical Parameter / E Field Preservation Volume	✓ E Sample Sample Bottle IOs
Ē	Filtered Method Required	Collected
٤	(VOA) (HG) 3.40 HIL	- 17 1 6 1 004 1 01
<u> </u>	2AOY	
n Require na Locaton)	Pes/PCB 40C Inorganes HNG,	
2 3	Explosives 4°C	
5 5	TPH H.SO	''
<u> </u>	Nerste H'50'	= <u></u> ;;
pie Collect (/ II Requied	Notes:	
وَ قِ		
Sample Collection Requirements (/ II Required at the Location)		
E		
ທົ		

Market Control of the 
The second	en e
	Project NTC- ORIAND Point of Interest 54-17 /0(A-17-10C) Project Number: 2530 05 Date: 2/12/97 Sample Location ID: 1760100/ Time: Start: 0930 End: 1330 Signature of Sampler: 18.
	Well Depth 47.5 R. Measured X Top of Well Top of Protective (from ground)  Casing Protective Casing Protective Casing Protective Casing Protective Casing Protective Casing Protective R. Casing Research
•	Purointal Sampling   Equipment ID   ( / All That Apply at Location   Furging   Sampling   Equipment ID   ( / All That Apply at Location   Methanol (100%)   Submerable Pump   25% Methanol (100%)   25% Methanol (100%)   Colonized Water   Delenized Water   Delenized Water   Liquintar Solution   Hexaris   H
· •	Ambient Air VOC
	Analytical Parameter / F Field Preservation Nethod Required Collected  Filtered Nethod Required Collec

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	GROUNDWATERSAMPL	
	Project NTC ONANDO	Point of Interest: SPIT
	Project Number: 02570.05	Date: (./,q/91
	Sample Location ID: OLD-17-10 C/17/50/00	
	Time: Start: 0945 End: 1/15	Signature of Sampler: Mah Tidl
	Well Depth 441 Pt. Measured Top of Well internet Casing	Well Riser Stick-upPl. ProtectivePl. ive (from ground)
Well Data	Depth to Water 2.71 Pt. Well Majorial: Well Locked?:	ProtectivePL Casing  Well Dia2 inch Water Level Equip. User;
Water Level/Well Data		# Inch Birct. Cand. Probe 8 inch Post Activated Pross. Transducer
*	Height of Water Column X	tal Gal Purged Coher Coh
Equipment Documentation	Pursing/Sampling Equipment Used:	Decontamination Fluids Used :
Ĕ	(/ If Used For) Purging Sampling Equipment ID	( J All That Apply at Location)
Ę	Penstabic Pump Submersible Pump	Methanol (100%)
8	Baler	25% Methanol/75% ASTM Type II water Dejorized Water
Ē	PVC/Sifeon Tubing Tefon/Sifeon Tubing	Liquiner Solution
Ē	Airth	HNO_/D.I. Water Solution
를	Hand Pump	Potable Water None
찚	Press/Vac Filter	
	-	
Analysis Data	Ambient Air VOC ppm Well Mouth ppm Field Data	Collectedin-line Sample Observations: Cloudy Clear Cloudy Colored
=	Purge Data @ 10 Gal @ 11 G	SH @ 20 CH. @ 22 CH. @ 27 CH.
<u> </u>	Temperature, Deg. C 258 260	26.0 26.7 26.0
Ana	pM, units  Specific Conductivity  (4.2)	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Fleld	(umhos/cm. @ 25 Deg. C.)	
Ē	Oxidation - Reduction, who my Disserved Oxygen, ports 3100 >200	>200 >200 >200
ample Collection Requirements (/ Il Required at the Location)	Analytical Parameter / If Field Preservation Volume Filtered Method Required	/ I Sample Sample Bottle IDs Collected
Ě	SVCA 80C	- 12,6,010,03
in Require the Location)	Pea/PCB 40C	
<b>5</b> 3	inorganies HNO;	
5 3	TPH H,SO	
	Narate HSO	= = '''
÷ }	Notes:	
ple Collectio (/ II Required at		
ق ح ح		
4		

		SAMPLE FIELD DATA
	roject NTC ORLANDO	Point of Interest: SA!
	roject Number: 02530. 05	Date: 6/16/97
S		1/17600202
T	ime: Start: 1245 End: 13	40 Signature of Sampler: Mak ( Mos
<del></del>		in the second of
	Well Depth	Top of Well Well Riser Stick-up Pl. Protective Pl. Top of Protective (from ground) Casing/Well Difference
		Top of Protective (from ground) Casing/Well Difference Casing
_		ProtectivePt
Water LeveVWell Data	<b>—</b>	County
=	Depth to Water FL Well Material: Well I	Locked?: Well Dia. 2 inch Water Level Equip. Used:
₹		Yes 4 inch Bect. Cond. Prote No 8 inch Ross Activated
3		Press, Transducer
. 💆		
<u> </u>		2 Garvoi Well integrity: Yes No
3	Height of Water Column X	Aroz. Casang Secure
	/2 PL15GWA.(6 in.)	
	Cal/R. (_in.)	
_	March and the Parity and March a	Decontemination Fluids Used:
Equipment Documentation	Puralno/Semplino Equipment Vend:	Service and the service of the servi
Ę	( / If Used For)	
5	100000	uipment ID ( All That Apply at Location)  Methanol (100%)
Ş	Penetakic Pump	25% Methanol/75% ASTM Type II water
Š	Baler	Congressed Water
7	PVC/Sicon Tubing	Liquinox Solution Hexane
•	Tenen/Silicon Tubing Airth	HNO_OLL Water Solution
톨	Hand Pump	Potable Water None
3	In-line Filter	
ш		
		Sample Observations:
	Ambient Air VOC ppm Well Mouth pp	m Feld Date Collected in-lineTurbidClearCloudy
2	<del></del>	in ContainerColoredOdor
inalysis Data	Puros Data Ø 5 Gal	0 /0 Gat 0 /7 Gat 0 /4 Gat 0 /6 Gat
÷	70.3	7/3 307 305 30.1
7	Temperature, Deg. C	1001 6.58 6.71 6.65
•	Specific Conductivity 420	Y20 375 Y30 Y20
Fleld	(umhos/cm. @ 25 Deg. C.)	
Ē	Oxidation - Reduction, of my Disselved Crypert, ppm	13.8 12.9 121 10.92
	Tudinaty	
•	Analytical Parameter / If Field Preservation	Volume / E Sample Sample Bottle IDs
=	Filtered Method	Required Collected
2	1600 (HG)	30x YUM / 1716 1002102
<b>2</b> 3	<i>\(\frac{1}{2}\)</i>	
글	Peet/PCB 40C Inorganics HNO,	
<b>5</b> 3	Explosives 4°C	
5 3	TPM H,S0,	
플	TOC HISO HISO	
	Notes:	
ů ŧ		
_		
ple Collection Require: (/ # Required at the Location)		
Sample Collection Requirements (/ # Require was Locator)		

	Project NTC-OLIAND SA 17	
	Project Number: 253005	Point of Interest (N-17-034) Date: 6/10/98
	Sample Location ID: 176-00-502	<u>6/10/48</u>
•	Time: Start: //OO End: //OO	Siegobar of Garagian 21 11/1
		Signature of Sampler: (1) . Muck
Water Level/Well Data	Height of Water, Column X 85 Get/R. (4 in.) =	Well Riser Stick-up Pt. Protective Pt. Casing/Well Difference Pt. Casing/Well Difference Pt. Casing Well Difference Pt. Casing
Equipment Documentation	Purcing/Sempling Equipment Used:  (/ If Used For)  Purging Sampling  Peristable Pump  Submerable Pump  Baller  PVC/Silicon Tubing  Teton/Silicon Tubing  Airtit  Hand Pump  In-line Filter  Press/Vac Filter	Decontamination Fluids Used:  ( / All That Apply at Location)  Methanol (100%)  25% Methanol/75% ASTM Type II water  / Deionized Water / Liquinox Solution  Herane  HNO_/D.I. Water Solution  Potable Water None
Fleid Analysis Data		Sample Observations:  a Collected
Sample Collection Requirements (/ N Request a the Locaton)	Analytical Parameter / E Field Preservation Volume Required  VOA	Sample Sortie IDs  Coffected

1975 - Salah S

,·		A STATE OF THE STA		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	·		
		GF	ROUNDWAT	ER SAMPLE	FIELD DA	<b>ITA</b>	
P	roject	NTE 1	RIAMO	n nyaéta da kanala d	Point of Inte	rest SAI	2
	roject Number:		530.05		Date:	6/19/99	
	Sample Location II		1-17-0	4A117/500	• •		1.0-1
7	ime: Start:	0925	End:	1005	Signature	of Sampler:	at the
Water Levelwell Data	Well Depth 12	777	Managed Historical Historical Historical PVC SS	Top of Well Top of Protectiv Casing  Well Lockedt: Yes No	Wet Riser S  (from ground  Wet Dia.	iticirupPt.  1)  2 inch _4 inch _5 inch	ProtectivePL Casing/Weil Difference  ProtectivePL Casing  Water Level Equip, Used:Elect. Cond. ProbeRoat ActivatedPress. Transducer
1 1919 A		- A 1	18 GMP. (2 in.) 18 GMP. (4 in.) — 5 GMP. (6 in.) GMP. (_in.)	13 Tou	IVol II Gal Purged	Well Integrity: Prot. Casing Secure Concrete Collar Intact Other	Yes No
Equipment Documentation	(/ # Used	For) ampling Pens Subm Subm PVC/ Tetoo Airtit Hand	abic Pump erable Pump Silicon Tubing vSilicon Tubing Pump Pump Pump Pump	Equipment ID		Descrized War Liquinox Solut Hexane HNO 70.1. War Potable Water None	ation) 1%) V73% ASTM Type II water ter tion ster Solution
Floid Analysis Data	Temperature, pH, units Specific Conc. (umhos/cm. (	Deg. C Sucrey Deg. C.)		ppm Faid Data  3al © 2 G  7 F 3  1. Y 8  3c 2  74. Y		Cal. © (1)	
,	Analytical Parameter	∕ I Field Filtered	Preservation Method	Volume Required	√ E Sample Collected	Sample Bottle IO	
(/ # Required at this Location)	SVOA PesuPCB Inorganics Explosives TPH TOC Nersis Notes:		400 400 F. SO. H. SO. H	3x40x1		/2 ' <u>6</u>	
Sample Collection Requirements (/ # Required as the Location)	Notes:						

		R SAMPLE MELD DATA
	Project ON AUDO	Point of Interest: CLD - 17-13 B
•	Project Number: 35 3d, a 5	Date: 6/10/98
	Sample Location D: 276-01301	21
•	Time: Start: 1/3	Signature of Sampler: 19 Miles la
	THING. SEE SAME THE STREET STREET STREET	Signature of Sampler: (1) Illicolo
Water Level/Well Data	Well Depth 10 Water 1997 Pa. Well Masorial: Well	Top of Well Well Riser State-up R. Protective R. Top of Protective R. Casing Well Difference  Casing FLUS A - MOUNT Protective R. Casing Well Difference  Locked?: Well Dia. \( \sum 2 \) inch Water Level Equip. Used: \( \sum 2 \) inch Sect. Cond. Prote  No 8 inch Ross Activated  Prot. Casing Secure Yes No Concrete Collect Intact  Total Gal Purped Other Collect Intact
Equipment Documentation	Purchas Sempling Equipment Veed:  (/ # Used For)  Purping Sampling Eq	Decontamination Fluids Used::
Ĕ	Periesalic Pump	uipment ID ( / All That Apply at Location)
ភ្ជ	Submersible Pump	25% Methanol/75% ASTM Type II water
ă	Balor	Delorized Water
Ę	PVC/Silicon Tubing Teton/Silicon Tubing	
Ĕ		HNO_/D.I. Water Solution
흑	Hand Pump	
5	In-line Filter	None
ш		
		and the second of the second o
	NY N	Sample Observations:
•	Ambient Air VOC ppm Well Mouth pp	
Analysis Data		in ConsumerColoredOdor
	Purpe Data Ø 5 Gal	9 8 cm 9 11 cm 9 13 cm 9 15 cm
~		
	Temperature, Deg. C	26.2 26.9 25.9
٤	pH, units <u>5-77</u> Specific Conductivity 2C, C	76 587 57.75
9	(umhos/cm. @ 25 Deg. C.)	
Fleid	Oxidation - Reduction, -/- my	
***	Dissolved Oxygen, ppm	
	7(2015.77 7200	720 7200 7200 7200
,		
Sample Collection Requirements (/ II Required at the Location)	Analytical Parameter / # Field Preservation Filtered Method	Volume / E Sample Sample Bottle IDs Required Colleged
훋	(VOA) (HOL) 3	17, 6,013,01
E 5	370A 20C	
크북	P-ex/PCB 40C	
5 3	Explosives HNO,	
n Require	TPH H SO -	
₽ :	700 H So* -	
2 3	Nitrate H 50	
Collect	Notes:	
0 4		and the second of the second o
를		
<b>E</b>		
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		GROUNDWA	HACK AND			
ρ	roject N77-	ORIAUDO	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Point of Int	erest QU	-17-14
P	roject Number: 17	601401		Date:	6/10/98	
S	ample Location ID:	2538.5			•	01 11
	ime: Start: 1000	End:	1300	Signature	of Sampler:	) Mack
Date	Well Dopth 48.50 Pt.	Historical	Top of Well Top of Protes Casing	Wel Riser:	ISH -HOST	Casing
Water Level/Well Data	Depth to Water 54 Pt.	Well Manerial PVC SS	West Locked?:  Yes  No	Wel Die.	4 ines	Water Level Equip. Used:  X. Elect. Cond. Prote Post Activated Pross. Transducer
Wai	Height of Water Column X			Total Gal Purged	Well Insegray: Prot. Casing Secure Concrete Coller Intac Other	<u>×</u> _
allon	· · · · · · · · · · · · · · · · · · ·	amplino Equipment Um	<b>H</b> :		Decontaminati	on Fluids Used :
Equipment Documentation	(/ If Used For) Purging Sampling	Penetabic Pump Submerable Pump Baller PVC/Silicon Tubing Tellon/Silicon Tubing Airth Hand Pump In-line Filter Press/Vac Filter	Equipment ID		Deienized W Liquiner Sol Hexane HNO_70.1. V Potable Wat	00%) nel/75% ASTM Type II water fater lution Vater Solution lef
Jata	Ambient Air VOC	ppm Well Mouth	<del>/ </del>	X	In-lineTu	Observations: roidClearCloudy loredOcor
Reid Analysis Data	Purge Data Temperature, Deg. C pH, units Specific Conductivity (umhos/cm. @ 25 Deg. Oxidation - Reduction, Dissolved Oxygen, ppn		Cu • 2C 2 2C 2 2S 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Cu • 27 (	921 185 E	1 2754 1735 1735 1735 1735 1735 1735 1735 1735
=	Analytical Parameter / 2 Fi	eld Preservati		/ I Sample Collected	Sample Bottle I	and the state of t
Sample Collection Requirements (7 # Require white Location)	VOA SYCIA SY	HCL 40C HN0, 4°C H 50 H 50 H 50	354è iu		17.; 26 	= ' <u> </u>

	GROUNDWATER SAMPL	ECHIELU DATA
	Project BAZ ALANDO	Point of Interest: OCD-17-15A
	Project Number: 2530, 05	Date: 6/9/78
	Sample Location ID: 27/50/50/	Commence of the commence of th
	Time: Start: 0900 End: 1200	Signature of Sampler: The Mush
Water Level/Well Data	Well Depth 1/7 P.   Measured   K Top of Well Missoned   Top of Protest Casing    Depth to Water 2/1/8 Pt.   Well Masseight   Well Locked?:   Yes   No    Height of Water Column   X   AS GAVP. (2 in.)   7   15 GAVP. (5 in.)   10   10   10   10   10   10   10   1	Well Riser Stictuup R. Protective Pt. Casing/Well Difference #FLUEH Protective Pt. Casing
Equipment Documentation	Pursing/Sempling Equipment Used:  (/ If Used For) Purging Sampling Equipment ID	Decontamination Fluids Used:  (
Fleid Analysis Data	Ambient Air VOC ppm Well Mouth ppm Feld Dat  Purge Data	Sample Observations:  La CollectedIn-lineTurbidClear \times Coupy In ContainerColoredOdor  Gal
Sample Collection Requirements (/ II Required at the Locales)	Analytical Parameter / E Field Preservation Volume Required  VOA	/ E Sample Sample Bortle IDs Collected

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Land Street Committee of the Street Street

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J	t same in the second of	GROUNDWAT	TER SAMPLE	EFIELD DATA	
Pr	oject	ORIAND		Point of Interest	7-166
Pr	piect Number: 23	130.05°	1. 1885 (\$ 38 A) 1 C	Date: 6/9/98	
St	emple Location ID:	16-01601			X NO 11
Ti	me: Start: 1200	End:	1700	Signature of Sampler:	)- Mores
	<u> </u>	mendan ya kanaki	ongsamme be	Same State of the	The second secon
	Well Dopen _P.60 P.	Measured	Top of Proces	Wel Riser Stictury Plan (from ground)	Casing/Well Ofference
	en en <del>Maria de</del> La compansión de la compa	2 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2	Casing	FLUSH-MOUNT	ProtectiveR
=	ring of the second of the seco		10 July 200 32 25	and the second second	Casng
/Well Dat	2 51 -			Well Dia. X 2 inch	Water Level Equip. Used:
<b>3</b>	Depth to Water 333 Pt.	Well Material:	Well Locked?: _X_Yes	4 inch	Best. Cond. Probe
Ş		ss	No	6 inch	Pross Activated Press, Transducer
<u> </u>		X .16 GWR. (2 in.)	-4	ial/Voi Well Integrity:	Yes No
Water	Height of Water Column X			Prot. Casing Secure	<u> </u>
	16. A.	15 GaVA. (6 in.) GaVA. (in.)	L <u>72</u>	cal Gal Purped Concrete Collar tritadi	
	*			and the second of the second o	jelo dje objektive jeti sektij
Ē	Puraina/S	ampling Equipment Use	₫:	Decontemination	on Fluids Vsed :
Equipment Documentation	e a see saard Card	***	10 10 10 10 10 10 10 10 10 10 10 10 10 1		
T T	(/ If Used For) Purging Sampling		Equipment ID	( All Thes Apply at La	
Ę	<u> </u>	Penetable Pump Submersible Pump		Methazol (10	ers) eV75% ASTM Type II water
ğ		Balor		▼ Deionized W	
=	Z Z	PVC/Silicon Tubing Tellon/Silicon Tubing		Liquinex Sol	Pro-
Ē	<u> </u>	Airth		HNO JOJ. V	fater Solution
큠		Hand Pump In-line Filter		None	•
ם	= =	Press/Vac Filter			
					N. 15-1800-
					Observations:
			A same State Da		
9	Ambient Air VOC	ppm Well Mouth	ppm Faid Da	z Collected In-line Tu	
Data		Spri Well Mouth		in Collected In-line 1 Tul	bidClearCoudy oredCdor
	Ambient Air VOC	ppm Well Mouth	Gal @ 10	a Collected	ored Clear Coudy ored Coor  Gal. © 22 Gal.
	Purpe Data Temperature, Deg. C	• <u>5</u> 26.5	GH • 10 27.1	Collected	bidClearCoudy oredCdor
	Purpe Data	€ _5		Collected	Gal. @ 22 Gal.  26.1
	Purge Data Temperature, Deg. C pH, units Specific Conductivity (umhos/cm. @ 25 Deg	255 26.5 2558 148	GH • 10 27.1	a Collected In-line £ Tul in Container Col	Clear Coudy ored Coudy ored Coudy ored Coudy Call Call Call Call Call Call Call Cal
Field Analysis Data	Purge Data Temperature, Deg. C pH, units Specific Conductivity	26.5 26.5 25.58 14K	GH • 10 27.1	a Collected In-line £ Tul in Container Col	Clear Coudy ored Coudy ored Coudy ored Coudy Call Call Call Call Call Call Call Cal
	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (umhos/cm, @ 25 Deg Oxidanon - Reduction, Dissolved Oxygen, ppr	25 5 14K	GH • 10 27.1	Collected	Gal. © 22 Gal.  Coor  Gal. © 798
	Purge Data Temperature, Deg. C pH, units Specific Conductivity (umhos/cm, @ 25 Deg Oxidanon - Reduction, Dissolved Oxygen, por	26.5 26.5 42.53 14K 14K 72.(C)	27.1 27.1 725 725	2. 5 26. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	Close _ Coudy ored _ Coudy ored _ Coudy ored _ Coudy _
Field Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (umhos/cm, @ 25 Deg Oxidanon - Reduction, Dissolved Oxygen, ppr	25	27.1 27.1 725 725	Collected	Close _ Coudy ored _ Coudy ored _ Coudy ored _ Coudy _
Field Analysis	Purge Data Temperature, Deg. C pM, units Specific Conductivity (umhos/cm, @ 25 Deg Oxidation - Reduction, Disabled Oxygen, ppr	C.)  4253  14K  4457  4457  This is a second of the control of the	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou
Field Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	# 5	Gal 6 /C 27.1 7.47 7.47 7.47 7.47 7.47 7.47 7.47 7	a Collectedin-line	Close _ Coudy ored _ Coudy ored _ Coudy ored _ Coudy _
Field Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	## 5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26.5   26	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou
Fleid Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	#C.)	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou
Field Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	# 55   14K	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou
Fleid Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	#C.)	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou
Fleid Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	# 55   14K	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou
Fleid Analysis	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	# 55   14K	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou
	Purpe Data Temperature, Deg. C pH, units Specific Conductivity (unitosicen, @ 25 Deg Oxidanon - Reduction, Disabled Oxygen, ppr T/VL/) Analytical Parameter / E F Filter	# 55   14K	Gal @ /C 27.1 725 725 90 Volume Required	a Collectedin-line	Close Coudy ored Coudy ored Coudy ored Coudy Cou

A Company		
	GROUNDWATER SAMPLE FIELD DATA	
Pro	The state of the s	
3	The state of the s	70_
A PERSONAL PROPERTY OF THE PRO	mple Location ID	
	ne: Start: Applies to the start of the start	0 011
		KON
Date	Wet Depart And By Sales Section Process  Top of Wed Wet Riser Section Process  Casing PLISA - HOLDT  Process  Casing  Casing	P. Well Difference
• • • • • • • • • • • • • • • • • • •	se	ol Equip. Used: . Cond. Prote Activated t. Transducer
	Height of Water Column Z S Carry (\$ in.)	Yes No
Equipment Documeniation	Pursing Sampling Equipment Used 3  (/ I Used For)  Purging Sampling Equipment ID (/All That Apply at Location)  Methanol (100%)  Submercible Purgs (25% Methanol/75% ASTM  Baller (25% Methanol/75% ASTM  Deionized Water (25% Methanol/75% ASTM  PVCSilicon Tubing (25% Methanol/75% ASTM  Liquinox Solution (25% Methanol/75% ASTM  PVCSilicon Tubing (25% Methanol/75% ASTM  Liquinox Solution (25% Methanol/75% ASTM  Mand Purgs (25% Methanol/75% ASTM  PVCSilicon Tubing (25% Methanol/75% ASTM  Mand Purgs (25% Methanol/75% ASTM  PVCSilicon Tubing (25% Methanol/75% ASTM  PVCSilicon T	
Field Analysis Dala	Purpe Data  Purpe Data  Gal. © Colored	E _ Cioudy
	TURBULTY 720 7200 7200 7200 7	263
Analy	ytical Parameter / If Field Preservation Volume / If Sample Sample Bottle IOs Filtered Method Required Collected	
	- MG 3×40/11/2 _ 17 1 (-10)	2,0/
고 등 3/ 크 루 ⁸ 6	40C - / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / / /	
Pie Collection Require (/ # Require to make Location)	znics HNQ, The spice of the spi	<u>',</u>
- T	PH	-,
D S Nicrati	H 50	<u> </u>
100 M	otes:	·′
_ 25 -		
ample Collection Requirements (/ # Required # the Localon)		

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		GROUNDWATER SAN	IPLE FIELD DATA	
	Project AMPANE		Point of Interest: SA 17	1012-17-184
AL MAN	Project Number		Date: 6/11/48	
	Sample Location ID:	ATTENTION OF THE PERSON OF THE	Signature of Sampler:	I Med
	Well Depth - William		Protective (from ground)	ProtectivePL Casing/Weil Difference
A. Visit el Sa	8		PLUSH-MOUDT	Protective P.
	Depth to Water 162	Well Lacksoff Well Lacksoff	- ·	Water Level Equip. Used:
		<u> </u>	4 inch 5 inch	Bect. Cond. Probe Roar Activated Proces. Transducer
	Height of Water Column	X sounding - 3	Sarvor Well integrity:	Yes No
	Height of Water Column	2 TASGER (41) - 12 TISGER (41) - 12	Prox. Casing Secure Concrete Collar Intact Contre	<u> </u>
		Sempling Environment Used :	Decontaminatio	n Fluids Used :
	S Cy I Used For			
	E Purging Sampling	Personalic Pome	ID ( All That Apply at Libit Methanal (10	cation) 0%)
	Equipment Document	Submersible Pemp		N75% ASTM Type II water
	<u> </u>	PVC/Sileon Tubing	Liquinax Solu Hexane	
		Airth	HNO JOJ. W	
		Hand Fump	None None	<b></b>
,	E	Proce/Vac Fiter		
. <u> </u>	Ambient Air VOC	D ppm Well Mouth Dppm F	ield Data Collected In-lineTurl	
				GAL (D) /2 GAL
		<u>5</u> a 0 _ 2	7	781
	Temperature, Deg. ( pH, units  Specific Conductive (umhos/cm. @ 25 D Critication - Reduction	576/	5174	44
	Specific Conductivity (umhos/cm. @ 25 D		36 235 242	
	Oxidation - Reduction Dissolved Oxygen,	n, de my		
	1 LADINITY		3.2 18.6 9.5	4 P.C.
-		Field Preservation Volu- ered Method Requ		
	POSTPCS  FOR TOC  TOC  TOC  TOC  TOC  TOC  TOC  TOC	<del>***</del>	SMI _ 17; C	=1,081,04
	S SVOA S S S S S S S S S S S S S S S S S S S	46¢		_''
	Explosives	HNG,		<b>=</b> ', <b>=</b> ', <b>=</b>
5	C TPH CO TOC	H 50		=',==',=
3	S TOC U S Natate O S Notes:	H,50'		
Č	S &		•	
<u>.</u>	<u> </u>			
	<u> </u>			

		ATER SAMPLI			
• • • • • • • • • • • • • • • • • • • •			Point of Inte	rest_54 17/0	YA-17-190
			Date:	6/11/98_	
		<del></del>		•	A all pl
Time: Start: 0700	End:	1200	Signature o	of Sampler: 19	). Mestel
	Historical Well Material:	Top of Well Top of Protecti Casing  Well Locked?:	o from ground	SH-MOUT	ProtectivePL Casing/Well Difference ProtectivePL Casing  Water Level Equip. Used:
Height of Water Column 2		•	n Gal Browned	— 4 inch — 8 inch  Well Integrity: Prot. Casing Secure Contrare Coller intest	Yes No
Purcing/Semaing	Penstatic Pump Submersible Pump Baler PVC/Silcon Tubing Tefon/Silcon Tubing Airtit Hand Pump In-line Filter	Equipment ID	ξ.	Methenol (100%	ion) ) 3% ASTM Type II water n
		ppm Field Data			Clear Cloudy
Oxidation - Recuction, Dissolved Oxygen, ppm	J- mv	20.3	- 14.7 - 14.5 - 14.5	27.3 242 142	1al. @ 20_ Gal.  7.52
Analytical Parameter / If Fig	d Preservation	n Volume Required	✓ f Sample Collected	Sample Bottle IOs	n territoria de la companio del companio de la companio del companio de la companio del la companio de la compa
SVOA Pest/PCB Inorganes Explosives TPM TOC Narize Notes:	HG 400 400 + 50 + 50 H 50 .	2.00 M		17.7-	
	Project Number: Sample Location ID: Time: Start:	Project: Number: 2530 CS  Sample Location ID: 1740 CMA  Sample Location ID: 1740 CMA  Time: Start: 0700 End:   Well Depth 244 Pt. Measured Historial Properties Properties Properties Programme Properties Proper	Project Number: 2530 CS  Sample Location ID: 174 C M   120 C	Project Number: 2530 05 Date:	Project Number: 2.53 0.5 Date: 6/1/7/ Sample Location ID: 17/

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		GROUNDWA	A I EK SAMELE	FIELD DATA		
	roject: VTC	- OLLANDO		Point of Interest:	OCD-17	-20C
	· · · · · · · · · · · · · · · · · · ·	530.05		Date: 6	10 PK	
	0,000.000.000.	176-020	(2)			. 11
	ample Location ID:	End:	1330	Signature of Sa		MIL
, Ti	me: Start <u>0930</u>	ena:				
	West Beptin 57-60m	Measured Historical	Top of Well Top of Protecti	Well Riser Stick-up	Pl Pr	P. Sing/Well Difference
	en e		Casing	PLU	SH -	nactiveR
	*	•				sing
vel/Well Dal	Depth to Water 7.06 PL	Wei Malerial	Well Locked?:	Well Die 🔀 2 in		er Level Equip. Used
. ≩		<b>∠</b> PVC	∠_Yes	4		Bect. Cond. Probe
ş		\$\$	No	e i	<b>-</b>	Post Activated. Press, Transducer
. 🐧						
ī	4.		1			
Ž		丛.18 GaVR. (2 in.)			rtegrily: Casing Secure	Yes No
3	Height of Water Column	(85 Gal/R. (4 in.) 1.5 Gal/R. (6 in.)	1 2-	Coner	ne Coller intact	文 二
		GAVR. (_in.	) L <u>51.</u> To	tal Gal Purped Other		
				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
-				, to measure of the	er e	The state of the s
Ē	Pura ina/	Sempling Equipment V	med:		Decontamination Flu	ide Veed :
볼						
를	(/ It Used For)		# - 1 A		That Apply so I sand	•
Ē	Purping Sampling	Penstatic Pump	Equipment 10	(24)	That Apply at Location Methanol (100%)	4
ž	X X	Submersible Pump			25% Methanol/759	& ASTM Type II water
Š		Balor			Deignized Water	•
= =		PVC/Silicon Tubing		د	Liquinax Solution -	
5	XX	Tehon/Silicon Tubing		-	HNO/D.I. Water S	Solution
ᇫ		Hand Pump		<u></u>	Potable Water	
		to Park Chara			None	
<u> </u>	_	In-line Filter		-		
Equipment Documentation		Press/Vac Filter				
Equl						
Equ!		Press/Vac Fiter	=	-	Sample Obse	
Equi	Ambient Air VOC		D ppm Fold Date	a Collected in-line	Turbid	∠ Clear _ Co
·	Ambient Air VOC	Press/Vac Fiter	****	In Con	Turbid turnerColored	∠ Clear _ Co _ Coor
* Data		Press/Vac Fiter	****		Turbid turnerColored	∠ Clear _ Co _ Coor
* Data	Purpe Data	Press/Vac Filer  ppm Weil Mouth  C	CH 0 12	∑in Con	Turbid turnerColored	∠ Clear _ Co _ Coor
* Data	Purge Data Temperature, Deg. C	Press/Vac Filer  ppm Weil Mouth	_ Gal @ <u>/5</u> 	≤in con  GM @ _2C_ GM  27.9	Turbid turnerColored	∠ Clear _ Co _ Coor
* Data	Purpe Data Temperature, Deg. C	Press/Vac Filer  ppm Weil Mouth  C	_ Gal @ <u>/5</u> 	∑in Con	Turbid turnerColored	∠ Clear _ Co _ Coor
* Data	Purge Data Temperature, Deg. C	Press/Vac Filer  ppm Weil Mouth  26. /  7.4	_ Gal @ <u>/5</u> 	≤in con  31.9  27.9	Turbid turnerColored	∠ Clear _ Co _ Coor
* Data	Purpe Data Temperature, Deg. C pH, unes Specific Conductivity (umhos/cm. @ 25 Deg Oxidapon - Reduction	ppm Wed Mouth  26. / 7.4  1.03	_ Gal @ <u>/5</u> 	≤in con  31.9  27.9	Turbid turnerColored	∠ Clear _ Co _ Coor
·	Purpe Data Temperature, Deg. C pH, unas Specific Conductivity (umhos/cm. @ 25 Deg	ppm Wei Mouth  ppm Wei Mouth  26. /  7.4  14.5	CM 0 /5 27.8 5-344 1772	∑in con  31.9  27.9  77.9  77.9  77.9  77.9  77.9  77.9  77.9	Turbid tauner Colored  at the 25 Ga  27 Ga  27 Ga	27.7 27.7
* Data	Purpe Data Temperature, Deg. C pH, unes Specific Conductivity (umhos/cm. @ 25 Deg Oxidapon - Reduction	ppm Wed Mouth  26. / 7.4  1.03	CM 0 /5 27.8 5-344 1772	≤in con  31.9  27.9	Turbid turnerColored	∠ Clear _ Co _ Coor
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unas Specific Conductivity (umhos/cm. @ 25 De( Oxidason - Reduction Dissolved Chypen, pp	ppm Wei Mouth  ppm Wei Mouth  26./ 5.4  ///5  a.c.)	27.8 5-344 1772	∑in con  31.9  27.9  27.9  24.6	Turbid tauner Colored  1. 69 2.5 Ga 27,9 97,45 147 147	27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unas Specific Conductivity (umhos/cm. @ 25 Dej Oxidason - Reduction Dissolved Oxygen, pp	ppm Wed Mouth  ppm Wed Mouth  26./ 5.4  //5.4  //5.4  //5.4  pm //5.6	Gal 0 /5  27.8  5-344  /77.	∑in con  31.9  27.9  27.9  24.6	Turbid tauner Colored  at the 25 Ga  27 Ga  27 Ga	27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unas Specific Conductivity (umhos/cm. @ 25 De) Oxidation - Reduction Dissolved Oxygen, pp	ppm Well Mouth  ppm Well Mouth  26./ 7.4  7.4  1.5.7  field Preserve	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unate Specific Conductively (umhos/cm. @ 25 De) Oxidapon - Reduction Dissolved Oxygen, pp	ppm Well Mouth  ppm Well Mouth  26. /  7. 4  7. 4  7. 4  7. 4  7. 7  m  // 5. 7  med Megnore  HQ.	Gal 0 /5  27.8  5-344  /77.	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored  1. 69 2.5 Ga 27,9 97,45 147 147	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unas Specific Conductivity (umhos/cm. @ 25 De) Oxidation - Reduction Dissolved Oxygen, pp	ppm Well Mouth  ppm Well Mouth  26./ 7.4  7.4  1.5.7  field Preserve	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unas Specific Conductivity (umhos/cm. @ 25 Der Oxidation - Reduction Disactived Oxygen, pp  Analytical Parameter / # F Filte  VOI SVOA Peer/PCB Inorganics	ppm Well Mouth  ppm Well Mouth  26. /  7.4  ///5  a. C.)  m  ///2 /  field Preserve Megno  HCL  40C  HNC,	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unes Specific Conductively (umhos/cm. @ 25 Dej Ozidation - Reduction Disactived Oxygen, pp  Analytical Parameter / # F Filte  VOA SVOA Pess/PCB Inorganics Explosives	ppm Wel Mouth  ppm Wel Mouth  26 /  7 /  7 /  7 /  10 /  m /  // 5 /  field Preserve  Method  Method  Method  ACC  HND,  4°C	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unas Specific Conductively (umhos/em. @ 25 Deg Oxidapon - Reduction Dissolved Oxygen, pp  The Dissolved Oxygen, pp  Analytical Parameter / E F Fitte  VOI SVOA Peeu/PCB Inorganics Explosives TPH	ppm Wel Mouth  ppm Wel Mouth  26 /  7 /  7 /  7 /  10 /  m /  // 5 /  field Preserve  Method  Method  Method  ACC  HND,  4°C	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unes Specific Conductively (umhos/cm. @ 25 Dej Ozidation - Reduction Disactived Oxygen, pp  Analytical Parameter / # F Filte  VOA SVOA Pess/PCB Inorganics Explosives	ppm Wed Mouth  ppm Wed Mouth  26./ 75.4  /// // //  ppm Wed Mouth  26./ // // // //  // //  // //  // // // /	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unas Specific Conductivity (umhos/cm. @ 25 Der Oxidason - Reduction Dissolved Oxygen, pp  Than I S T File  File  VOA SVOA Peer/PCB Inorgancs Explosives TPH TOC	ppm Wel Mouth  ppm Wel Mouth  26 /  7 /  7 /  7 /  10 /  m /  // 5 /  field Preserve  Method  Method  Method  ACC  HND,  4°C	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
Field Analysis Data	Purpe Data Temperature, Deg. C pH, unate Specific Conductively (umhos/em. @ 25 Der Oxidazion - Reduction Dissolved Oxygen, pp  The Dissolved Oxygen, pp  Analytical Parameter / E F Fitte  Fitt	ppm Wed Mouth  ppm Wed Mouth  26./ 75.4  /// // //  ppm Wed Mouth  26./ // // // //  // //  // //  // // // /	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7
ion Requirements  # Told Analysis Data	Purpe Data Temperature, Deg. C pH, unate Specific Conductively (umhos/em. @ 25 Der Oxidazion - Reduction Dissolved Oxygen, pp  The Dissolved Oxygen, pp  Analytical Parameter / E F Fitte  Fitt	ppm Wed Mouth  ppm Wed Mouth  26./ 75.4  /// // //  ppm Wed Mouth  26./ // // // //  // //  // //  // // // /	Gal @ /5  27.8  5-344  1/12	In Con  Gal © 2C Gal  27.9  77.0  77.0  7.0  7.0  7.0  7.0  7.0	Turbid tauner Colored Ali & Z. Ga	27.7 27.7 27.7 27.7 27.5 27.7 27.7 27.7

		NDWATER SAMPLE	LLLU DATA	
	Project NTC ORLA	NOO	Point of Interest: - 57	417
·.	Project Number: 025 30		Date: 6/16/92	?
	Sample Location ID: 0LD-/	7-21B/17602X	31	والمستون المستون المست
•	· · · · · · · · · · · · · · · · · · ·	nd: 1215	Signature of Sampler:	What I al
			ownstore or camples.	Tan I Tuons
	Well Depth		Well Riser StatusPt. (from ground)	Protective PL Casing/Well Difference Protective PL
Water Level/Well Data	Depth to Water 885 Pt. Well Materia PVCSS	st Well Locked?: YesNe	Well Die2 inch 4 inch 6 inch	Casing  Water Level Equip. Used:
Water	Meight of Water Column X	7. (4 in.) - 7. (6 in.)	Prot. Casing Secure	Yes No
Equipment Documentation	Puraina Semalina Equip	ment Used:	Decontamina	ion Fluids Used :
=	( / If Listed For)	•		
Ş	Purping Sampling	Equipment ID	( All That Apply at L	acation)
5	Peristable Pu	mp	Methanol (1	00%)
8	Submersible :	Pump	25% Motha	nol/75% ASTM Type II water
-	PVC/Silicon 1	'ubing	Liquines Se	
5	TefonSilcon	Tubing	Hexane	
2	Airtit			Water Solution
3	The Print		Potable Wa	<b>.</b>
-			None	
Ē	Pross/Vac Fit	~	None	
Ed	Prose/Vac Fit		None	
	Ambient Air VOC ppm WeE M		Sample Starting	
			Sample Starting	
		louthppm Faid Data Co	Sample Starting	rbidClearCoudy loredOdor
	Ambient Air VOCppm Weit M	S Gal @ /5 Gal	Sample Sample on Container Co	clear Cloudy larged County Gal. © ZY Gal.
	Ambient Air VOCppm Weit M	9 Gal @ /5 Gal	Sample Sample in time in Container Co	Gal. © 7 Gal.
Analysis Data	Purps Data	S Gal @ /5 Gal	Sample Sample on Container Co	clear Cloudy larged County Gal. © ZY Gal.
Analysis Data	Purps Data	9 Gal @ /5 Gal 27.6	Sample  in-line	Gal. © 7 Gal.
	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C pH, units Specific Conductively (uminos/cm. @ 25 Deg. C.) Oxidation - Reduction,	Gal @ /5 Gal   G	Sample Sample of the information	Gal. © 7 / Gal.
Analysis Data	Purpe Data  Purpe Data  Temperature, Deg. C prt, units Specific Conductivety (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, of my	9 Gal @ /5 Gal 27.6	Sample  in-line	Gal. © 79 Gal.  28.0  5.67  270
Analysis Data	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C pH, units Specific Conductively (uminos/cm. @ 25 Deg. C.) Oxidation - Reduction,	Gal @ /5 Gal   G	Sample Sample of the information	Gal. © 7 / Gal.
Fleid Analysis Data	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C pH, units Specific Conductively (unitosizem. © 25 Deg. C.) Oxidation - Reduction, of my Bissolved Oxygen, spin Turbidity  Analytical Parameter / E Field Filtered	Gal @ /5 Gal   G	Sample Sample of the information	Clear
Fleid Analysis Data	Purge Data  Purge Data  Purge Data  Temperature, Deg. C pH, units Specific Conductively (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, of miv Dissolved Oxygen, spen Tochi dity  Analytical Parameter / E Field Filtered  Vol. HCL	Gal @ // Gal  2 9 9 27.6  C./5 599  2 200 >200  Method Required	Sample Sample Bortle I	Gal. © 7 / Gal.  2 / Gal.  2 / Gal.  2 / Gal.  2 / Gal.  3 / Gal.  4 / Gal.  5 / Gal.  5 / Gal.  6 / Gal.  7 / Gal.  7 / Gal.  8 / Gal.  9 / Gal.
Fleid Analysis Data	Purge Data  Purge Data  Purge Data  Temperature, Deg. C. pH, units Specific Conductively (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, of miv Dissolved Oxygen, sem	Gal 6 /5 Gal 29.6  S. 9 27.6  S. 87	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270
Fleid Analysis Data	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C pri, units Specific Conductively (umhosizm. @ 25 Deg. C.) Oxidation - Reduction, of my Bissolved Oxygen, sem Tocki dity  Analytical Parameter / If Field Filtered  VOA SVOA Pest/PCB  Analytical 400 Pest/PCB	Gal @ /3 Gal   G	Sample Sample Bortle I	Gal. © 7 / Gal.  2 / Gal.  2 / Gal.  2 / Gal.  2 / Gal.  3 / Gal.  4 / Gal.  5 / Gal.  5 / Gal.  6 / Gal.  7 / Gal.  7 / Gal.  8 / Gal.  9 / Gal.
Fleid Analysis Data	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C prt, units Specific Conductivety (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, -/- miv Dissolved Oxygen; sem -/- Toribidity  Analytical Parameter / 8 Field Filtered  VOA SVOA Pest/PCB Inorganics Explosives 4°C	Gal @ /3 Gal   G	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270
Fleid Analysis Data	Purge Data  Purge Data  Purge Data  Temperature, Deg. C pH, units Specific Conductively (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, of miv Dissolved Oxygen, sem	Gal	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270
Fleid Analysis Data	Purps Data  Purps Data  Purps Data  Temperature, Deg. C pPt, units Specific Conductively (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, of miv Bissolved Oxygen, sem /- Turbidity  Analytical Parameter / If Field Filtered  (VOA) SVCA 40C Pest/PCB 40C Inorganics 40C TPH HS	Gal © /5 Gal Co	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270
Fleid Analysis Data	Purps Data  Purps Data  Purps Data  Temperature, Deg. C pH, units Specific Conductively (umhos/cm. @ 25 Deg. C.) Oxidation - Reduction, of miv Bissolved Oxygen, sem /- Turbidity  Analytical Parameter / E Field Filtered  (VQA) SVCA Pest/PCB Inorganics Explosives TPH TOC  HS	Gal © /5 Gal Co	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270
Fleid Analysis Data	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C pH, units Specific Conductively (umbos/cm. @ 25 Deg. C.) Oxidation - Reduction, -/- miv Dissolved Oxygen, spm/ Turbidity  Analytical Parameter / If Field Filtered  VOA SVOA Pet/PCB HOD SVOA Pet/PCB HOD STOC HOD TOC Nerrate HS	Gal © /5 Gal Co	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270
Fleid Analysis Data	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C pH, units Specific Conductively (umbos/cm. @ 25 Deg. C.) Oxidation - Reduction, -/- miv Dissolved Oxygen, spm/ Turbidity  Analytical Parameter / If Field Filtered  VOA SVOA Pet/PCB HOD SVOA Pet/PCB HOD STOC HOD TOC Nerrate HS	Gal © /5 Gal Co	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270
ments Field Analysis Data	Purpe Data  Purpe Data  Purpe Data  Temperature, Deg. C pH, units Specific Conductively (umbos/cm. @ 25 Deg. C.) Oxidation - Reduction, -/- miv Dissolved Oxygen, spm/ Turbidity  Analytical Parameter / If Field Filtered  VOA SVOA Pet/PCB HOD SVOA Pet/PCB HOD STOC HOD TOC Nerrate HS	Gal © /5 Gal Co	Sample Sample Bortle I	Gal. © 7 / Gal.  280  5.67  270  5.67  270

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		GROUNDWATER SAMP	LE FIELD DATA	
	Oncionate Control	E OCEANOO	Point of Interest: SA	17
	Project Number:	02070 05	Date: 6/16/3	18
	Semale I ocation ID	DLD-17-220/176		11-1
	Time: Start	05 Ed. 1930	Signature of Sampler:	be I das
	Well Depth	A Top of We		ProtectiveRL Casing/Well Difference
	=	Coarry		ProtectivePL Casing
	Depth to Water	P. Well Locked?:	Well Dia2 inch	Water Level Equip. Used:
	Depart to Water 2	Yes Yes	4 inch	Becs. Cond. Probe Rost Activated
		100		Press, Transducer
	<b>-</b>	75	_Gal/Voi Well integray:	Yes No
	Height of Water Column	2 18 Garrigan)	CLIVE Well regard; Prot. Casing Secure	
	<u>36-E</u> =		_Total Gal Purped Coher Intal	•
			and the second second	· · ·
		gg var var gg var var var gg var	general desirence of the second secon	aan dha dhaadha
	E Parel	ng/Sempling Environment Used :	Decentaminat	ion Fluida Used :
	ğ			•
4	Equipment Documental	in the control of the	( / All That Apply at L	
	<b>§</b> – –	Periodatic Pump	Metharol (1	00%) nol/75% ASTM Type II water
w ·	× = =	Balor	Z Deignized V	Vater
		PVC/Silicon Tubing	Liquinex So	
		Airtt	HNO /D.I. S	Nater Solution
	<u>-</u> -	Hand Pump	None None	• n.
		Press/Vac Filter		
·	Ambient Air VOC	ppm Well Mouthppm Field	Data Collected in-line	F Observations: roid Clear Coudy blored Ocor
•		1 6 6 au o 20	CH 0 30 CH 0 31	Car @ 10 Car
	Temperature, Deg pH, units  Specific Conducts (umhos/cm, @ 25 Oxidapen • Reduct	20 6 21	6 28.6 22	27.4
	pH, units	<u> </u>	70 5.86 F. 5 200 20	5.99
	Specific Conduction (umhos/cm. @ 25			
	Oridation - Reduc	non al my	00 >200 >20	2200
	Disselved Oxygen	Vehidity		
				Mark Control of the Control
		# Field Preservation Volume Filtered Method Required	✓ E Sample Sample Bottle Collected	iOs
		на		- 1022,01
	E SVOA	40C		
	를 위 Pest/PCB 및 inorganes	40C		<u> </u>
	E TPH	#C		—', —', —
	E Z TPH O N TOC	H 50		
	Narate	— н ₅₀ ,		
	O M TOC			
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	GROUNDWATER SAMPL	
	Project NTC ORLANDO	Point of Interest: SAI7
	Project Number: 025 30.05	Date: 6/18/98
	Sample Location ID: 0L0-17-23A/17/50230	
1	Time: Start: 10/5 End: 1/05	Signature of Sampler: Mal Train
		ting the second tracks are the companies of the statement of the second of the second of the second of the second
2	Well Depth //.) Pt	Wef Riser Stict-upPt. ProtectivePt.  (from ground)
Water Level/Well Data	Depth to Water 27 Pt. Well Material: Well Locksoff:Yes	Wef Dia. 2 inch Water Level Equip, Used:  4 inch Equip Cond. Prote  Roat Activated  Press. Transducer
Water	Height of Water Column X 85 Gal/R. (2 in.)	Concrete Collar Intact  Concrete Collar Intact  Concrete Collar Intact  Concrete Collar Intact
non	Puraing/Sempling Equipment Used:	Decontemination Fluids Used:
Equipment Documentation	( / If Used For) Purging Sampling Equipment ID Peristatic Pump Submerable Pump Bailer PVC/Silcon Tubing Tefon/Silcon Tubing Airtit Hard Pump In-line Filter Press/Vac Filter	( / All That Apply at Location)  Methanol (100%)  25% Methanol/75% ASTM Type II water  Dejorized Water  Liquinex Solution  Hexane  HNO_FD.I. Water Solution  Potable Water  None
Data	Ambient Air VOCppm Well Mouthppm Field Date	Sample Observations:  Collected In-line Turbid Clear Coudy In Container Colored Octor
Field Analysis Data	Purpe Data © 5 Gal © 7 Co Temperature, Deg. C 27.6 26.6 pri, units Specific Conductivity (umhos/cm. @ 25 Deg. C.) Ondapon - Reduction, e/- mv Disselved Congress, sem Turbushit	315 318 310 3105 209
	Analytical Parameter / I Field Preservation Volume Fibered Method Required	✓ ₹ Sample Scale IOs Collected
교 설 전 기	SYCA	12 6 , 023, 01 17 6 , 023, 01 2 17 6 , 023 (010
Sample Collection (/ # Required at	Notes:	

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	Project NFC BRCANDO	Going Spring		SAIT
	Project Number: 025 30.05	Date	of interest	9/88
	Sample Location ID: OCD-17:25	C/17602501		9/5 1
•	Time: Start: 10%	The second secon	and the second of the second o	1615
	Time: State	Sign	rature of Sampler	- Man / Man
	AN THE PROPERTY OF THE PARTY OF	# (f)		
	Well DepthPi		f Riser Stick-up m ground)	Pt. ProtectivePt. Casing/Well Difference
Water Level/Well Data	27.		_	ProtectivePL Casing
<b>5</b>		ell Lacked?: Well	Die2 inch	Water Level (Equip, Used: Bott, Cond. Prote
3		^{No}	6 inch	
. 🤰	The state of the s	• • • • • • • • • • • • • • • • • • • •		Press. Transducer
•			• •	
¥	Hongrit of Water Column X IS GairR. (2 in.) =	6.0 carva	Well Integray: Prot. Gasing 5	Secure
	Guratin)	L O TOUN CAI PU	rged Concrete Coll	A PRACE
		and the second s	enter de la caracteria de la composición del composición de la com	The second secon
	8.8			
Equipment Documeniation	Puralno/Sempline Equipment Used :		Decents	mination Fluids Used:
를	(/ If Used For)			
Ē	Purging Sampling	Equipment ID	( All That App	
ີລ	Peristalic Pump Submersible Pump			anol (100%) Methanol/75% ASTM Type II water
Š	The Balor of Species		Doige	tized Water
Ę	PVC/Silicon Tubing			nex Solution
	Tellon/Silicon Tubing		Hexa	re y/0.1. Water Solution
يق	Hand Pump			you water solution
3	h-ine Filer Press/Vac Filer		None	•
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		at state i i skulptur i provinci i mora i skipi i krataji, si i skutetje, state bija stiriti i	kalisti je i rojeri alije 4 i Kestiri 196	<mark>e 1865, in propose de la 1860, persoque de</mark> la companya de la companya de la companya de la companya de la comp
	Ambient Air VOCgpm Well Mouthg	opm Field Data Collected		Sample Observations:
3	210at 21 400 ppm 144 moun	pm rand Oata Comedag	in-line	ColombColor
Analysis Dala		<u>an an tanan ayan san at amin'i ayan takan an an akan tanan tana</u>	est <del>ati in teres a conserva de la co</del>	
=	Purpe Data	10 - 2 - CH 0 -	_ <del>@</del> car @ _	R Car @ CO Car
<u> </u>	Temperature, Deg. C	28.1	29.2	28.8 28.7
Š	pH, units	727	7.73	7.80 7.29
-	Specific Conductivity 220 (umhos/cm. @ 25 Deg. C.)	600	610	130 480
Field	Oxidation - Reduction, -/- my			<u> </u>
-	Tychiach ) 200	200	2200	>200 200
		<u>arian da managan da panagan da managan da m</u>	<u>- Landing (1987)                                    </u>	
			A CONTRACTOR STATE OF THE STATE	
•	Analytical Parameter y # Field Preservation	Volume / E Sa		lotte IOs
Sample Collection Requirements (/ 8 Required a she Locator)	Filtered Method	Required Colle	G#7	The second secon
Ĕ	ASSA (HG.)	369041 -	12	6 1025 01
= 3	SVCA 40C Peer/PCB 40C	<del></del> _		
2 2	inorganies HNO,		<del>-</del>	· —— / —— / ——
£ ;	Explosives			
5 4	TPH H.S0 H.S0*			
2 3	Narme H S0			
ple Collection Require (/ II Required at the Locator)	Notes:			
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Marie Carlos Car

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Den	ect	1				Point of la		5A17	7	and the state of t
Pro	ect Numbe		02570	05		Date:	4/17	198		
Sen	hpie Locati	on ID:	010-1	7-261	4/17/06		•		1/1	
Tim	e: Start:	1026		nd:	1050	Signatur	re of Sample	r. Mas	Istan	
			. <u> </u>	(4 <b>6</b> -1)						
	Well Depth	12 1			Top of Well	Well Rise	er Stick-up		rotective	P.
				oncal of	Top of Pros	ective from gro	ourd)	C	Casing/Well Diff	succe.
B		7.4							rotective	R
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•	Depth to Wa	<u>2.23</u> p.	Well Mate		Well Locked?:	Wes Die	2 inch	W	Bect. Cond	
		* 150 A	PV		Yes		6 inch	•	Float Activa	ted
}				A 175 P	7				Pross. Tran	educe/
				\$ 7			** · ·	•		
				VR.(2 in.)	T-16	_CTIAN	Well Integri Prot. Casin		Y 005	No
•	Height of Wa	ter Column 3		VR.(4 in.) · VR.(6 in.)	1/	Total Gal Purced	Concrete C	•		
	•	2.2		ur Lini	/_	i pun vai Purged	Other		. —	
		<b>三维</b>	,	· · · //			or a major was a constitution			*********
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	**************************************	<u>Pursing</u>	Sempling Eas	roment.Vee	<b>2</b> :		TARCO	THE PERSON PROPERTY OF	HINE YES	wego .
	1/2	Used For)	***		•					
	a									
	Purgine	Sampling	-		Equipment 10			lipply at Liscali ethanol (100%)		
Ę	Loigne	Sampling	Penstaltic Submersit		Equipment 10		M	ethanol (100% 1% Methanol/7	) '5% ASTM Type	e II water
	-	Sampling	Submersit Baler	ю Рипр	Equipment 10			ethanol (100%) 1% Methanol/7 sionized Water	) 5% ASTM Type '	e II water
neon )u	-	Sampling	Submersit	le Pump Sign n Tubing	Equipment 10		22 22 20 20 20 20	ethanol (100%) % Methanol/7: pionized Water quinex Solution	) 5% ASTM Type n	e II water
ment Docum		Sampling	Submersit Baler: PVC/Silco Tellon/Silco AirSt	io Pump n Tubing on Tubing	Equipment 10		Marie   Mari	ethanol (100%) 1% Methanol/7: sionized Water quinox Solution xxane NO ₂ /0.1. Water	) 5% ASTM Type n	e II water
inibweut nocai	-	Samping	Submersit Baller PVC/Silico Tellon/Silico	ie Pamp n Tubing on Tubing	Equipment ID		Marie   Mari	ethanol (100%) 1% Methanol/7: sionized Water quinox Solution ixane NO ₂ /0.1. Water stable Water	) 5% ASTM Type n	e II water
Equipment Documentation	-	Samping	Submersit Baller : PVC/Silico Teflon/Silico AirSt Hand Pum	le Pump  - Sage  - Tubing  - on Tubing	Equipment ID			ethanol (100%) 1% Methanol/7: sionized Water quinox Solution ixane NO ₂ /0.1. Water stable Water	) 5% ASTM Type n	e II water
Equipment Docur	-	Samping	Submersit Baler: PVC/Silico Tellon/Silico Airtit Hand Pum In-line Filte	le Pump  - Sage  - Tubing  - on Tubing	Equipment ID			ethanol (100%) % Methanol/1: pionized Water quinez Solution exane NO y/D.I. Water priable Water prie	3% ASTM Type	• Il water
Equipment Docur	=======================================		Submorsit Baler PVC/Silco Tefon/Silc Airth Hand Pum In-line Filk Press/Vac	n Tubing on Tubing		Dam Collected		ethanol (100%) % Methanol/7: sionized Water quinox Solution krane NO y/0.1. Water one Sample Ob	S% ASTM Type  r Solution  eervations:	e il water
equipment Document	Ambient A		Submersit Baler: PVC/Silico Tellon/Silico Airtit Hand Pum In-line Filte	n Tubing on Tubing		Data Colocted	Manual   M	ethanol (100%) % Methanol/I: sionized Water quinex Solution xcare NO //D.I. Water one  Sample ObTurbid	servations:	
Usta Equipment Docur	=======================================	- Voc _	Submorsit Baler PVC/Silco Tefon/Silc Airth Hand Pum In-line Filk Press/Vac	n Tubing on Tubing	ppm Feld		In-line In Container	ethanol (100%)  Methanol/7: sionized Water strane  NO y/D.I. Water strable Water strable Water strable Chief	servations:	
	=======================================		Submorsit Baler PVC/Silco Tefon/Silc Airth Hand Pum In-line Filk Press/Vac	n Tubing on Tubing		Cana Colocued	in-line In Contained	ethanol (100%)  Methanol/7: sionized Water strane  NO y/D.I. Water strable Water strable Water strable Chief	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
	Ambiert A	Purge Data	Submorsit Baler PVC/Silco Tefon/Silc Airth Hand Pum In-line Filk Press/Vac	n Tubing on Tubing	ppm Feld		In-line In Container	ethanol (100%)  Methanol/7: sionized Water strane  NO y/D.I. Water strable Water strable Water strable Chief	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
	Ambient A	Purge Data	Submorali Baler PVC/Sico Television Airan Hand Pum In-line Filte Press/Vac	n Tubing on Tubing	ppm Feld Gal @7	3 <u>2</u>	In-line In Container	ethanol (100%)  Methanol/7: sionized Water strane  NO y/D.I. Water strable Water strable Water strable Chief	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
	Tempe ph, uni Specific (umhos	Purge Data rature, Deg. C	Submorali Baler PVC/Silco Tellor/Silco Airat Hand Pum In-line Filte Press/Vac	Pump In Tubing on Tubing Filter  I Mouth	ppm Feld Gal @7	3 <u>2</u>	in-line in Contained	stharpl (100%)  Methanol (100%)  Methanol (100%)  Junoz Solution  Turbid  Colorec  27. [  C-72	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
3	Tempe pM, uni Specific (umhos Oxidan	Purpe Data rature, Deg. C ts: Conductivity vcm. @ 25 Deg on - Reduction	Submorald Baler PVC/Sico Tefon/Sic Artit Hand Pum In-line Fits Preser/Vac  ppm We  2 C.)	Pump In Tubing on Tubing Filter  I Mouth		a. •	in-line in Contained	stharpl (100%)  Methanol (100%)  Methanol (100%)  Junoz Solution  Turbid  Colorec  27. [  C-72	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
	Tempe pM, uni Specific (umhos Oxidan	Purge Data rature, Deg. C ts: Conductivity years. @ 25 Deg. on - Reduction	Submorald Baler PVC/Sico Tefon/Sic Artit Hand Pum In-line Fits Preser/Vac  ppm We  2 C.)	Pump In Tubing I	ppm Fuld Gal @	a. •	In-line In Contained  Gal. ©	sthanol (100%) Methanol/7.  We Methanol/7.  Whethanol/7.  Whethanol/7.  Water pulnex Solution is are in the colored water one of the colored water	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
	Tempe pM, uni Specific (umhos Oxidan	Purge Data rature, Deg. C S c Conductively yern. @ 25 Deg on - Reduction	Submorald Baler PVC/Sico Tellor/Sic Airat Hand Pum In-line Filte Press/Vac  ppm We	I Mouth		Gu •	In-line In Contained  7. 0	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
	Tempe pM, uni Specific (umhos Oxidan	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Baler PVC/Sico Tellor/Sic Airat Hand Pum In-line Filte Press/Vac  ppm We  ppm We	Filter  Mouth	ppm Feld  Gal ©	a. •	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%) Methanol/7.  We Methanol/7.  Whethanol/7.  Whethanol/7.  Water pulnex Solution is are in the colored water one of the colored water	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	_ Cloudy
	Temper A Temper pM, unit Specific (umhos Oxidan) Dissolv	Purpe Data rature, Deg. C SS: Conductivity vom. @ 25 Deg on - Reduction	Submorali Balor PVC/Sico Television Airan In-line Filta Press/Vac  ppm We  ppm We  ppm We  ppm We  ppm We  ppm We	Preservation	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy
Tota Atalysis Osla	Temper A Temper pM, unit Specific (umhos Oxidan) Dissolv	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Balor PVC/Sico Television Airan In-line Filta Press/Vac  ppm We  ppm We  ppm We  ppm We  ppm We  ppm We	Preservation	ppm Feld  Gal ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  r Solution  cervations: Clear dCoor	Caudy
Tota Atalysis Osla	Temper ph. unit Specific (umhos Oxidan Discoliv SVOA Pest/PCB	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Baler PVC/Silco Tellor/Silco Tellor/Silco Arati Hand Pum In-line Filte Press/Vac  ppm We  ppm We  ppm We  ppm We	Preservation Method	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy
Tota Atalysis Osla	Temper A  Temper pht, unit Specific (umnos Oxidan Disectiva SVOA Pest/PCB organics	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Baler PVC/Silco Tellor/Silco Tellor/Silco Arati Hand Pum In-line Filte Press/Vac  ppm We  ppm We  ppm We  ppm We	Preservation Method	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy
this Location) Tiold Allaly Sia Units	Temper A Temper pht, unit Specific (umhos Oxidan Diasoft SVOA Pest/PCB organics Explosives TPH	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorside Baler PVC/Sides Televiside Airst Hand Pum In-line Filts Press/Vac  ppm We  ppm We  ppm We  field	Preservation Mouth  Preservation Mouth  ACC HNSO	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy
Materiorication) Trend Analysis Data	Temper A  Temper ph, unit Specific (umhos Oxidam Dissolution)  MOA SVOA Pest/PCB organics Explosives	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Baler  PVC/Sico Tehon/Sic Airat Hand Pum In-line Filte Press/Vac  ppm We  ppm We  ppm We  ppm We	Preservation Method  ACC HND, 4°C HND,	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy
Materiorication) Trend Analysis Data	Temper A Temper ph, unit Specific (umhos Oxidan Diesoft SVOA Pest/PCB organics Explosives TPH TOC	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Baler  PVC/Sico Tehon/Sic Airat Hand Pum In-line Filte Press/Vac  ppm We  ppm We  ppm We  ppm We	Preservation Mouth  Preservation Mouth  ACC HNSO	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy
Materiorication) Trend Analysis Data	Temper A Temper ph, uni Specific (umhos Oxidan) Dissolv SVOA Pest/PCB organics Explosives TPH TOC grate	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Baler  PVC/Sico Tehon/Sic Airat Hand Pum In-line Filte Press/Vac  ppm We  ppm We  ppm We  ppm We	Preservation Method  ACC HND, 4°C HND,	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy
Mark Locator) Tiest Attacks Data	Temper A Temper ph, uni Specific (umhos Oxidan) Dissolv SVOA Pest/PCB organics Explosives TPH TOC grate	Purge Data resture, Deg. C ts c Conductively yern. @ 25 Deg on - Reduction we Oxygen, se To be defined.	Submorali Baler  PVC/Sico Tehon/Sic Airat Hand Pum In-line Filte Press/Vac  ppm We  ppm We  ppm We  ppm We	Preservation Method  ACC HND, 4°C HND,	ppm Faid  Gai ©	Gal. 6	In-line In-Container  Gal. ©  7. 0  Same Same	sthanol (100%)  Methanol (100%)  Methanol (100%)  Sample Water  property (100%)  Sample Ob  Turbid  Colored  27. (  6-92  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (   27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (  27. (	s% ASTM Type  r Solution  eervations:     _ Clear d    _ Coor	Caudy

	GROUNDWATERSAN	
	ProjectNTC BRIANDO	Point of Interest SAIT
	Project Number: 025 30.05	Date:
	Sample Location ID: 010-17-210/176	<u>CZ</u> 201
	Time: Start: 1/15 End: 1245	Signature of Sampler: Mah Inday
		and the second of the second o
	Well Depth Top of W	fell Well Riser Stick-up R. Protective R.
	Himpered	rotective (from ground) Casing/Well Difference
	Casing	
		ProtectiveP.
		•
Water Level/Well	Dopth to Water Pt. Well Material: Well Locked?:	Trade Cook. Cook.
Ş		# inch Bect. Cond. Prote B inch Rest Activated
Š		Pross. Transducer
۳.		
÷	2.18 GWR. (2in) - 3.1	Garvol Well integray: Yes No
₹		CALIVOI Well Integrity: Yes No Prot. Clasing Secure
	715 A15 Cart. (6 in.) /6	Total Call Burners Coller Intact
	@#R:_hj	Coner
_	Puraina Semplina Equipment Used:	• • • • • • • • • • • • • • • • • • •
Equipment Documentation	2 And the second desired to the second secon	Cocontamination Fluids Used:
2	(/ E Used For)	,
Ē	Purging Sampling Equipment (C	. It is the state of the state
Ş	Periotatic Pump Submersible Pump	
å	Saler Saler	Deignized Water
Z	PVC/Silicon Tubing	Cruinex Solution
Ē	Airts	Hexare HNO_/0.1. Water Solution
즉	Hand Furns	Potable Water
5	In Fresh Vac Fiter	- None
_		• • • • • • • • • • • • • • • • • • •
	Ambient Air VOCppm Well Mouthppm Field	Sample Observations:  Data CofectedIn-lineTurbidClearCloudy
Analysis Data		In Container Colored Odor
9	Purpe Data @ 5 Gal @ /	Car @ 12 Car @ 14 Car @ 16 Car
=	46.3	
<u> </u>	Temperature, Deg. C 268 26.	
-	Specific Conductivity 740 720	
Fleid	(um/ros/cm. @ 25 Deg. C.)	
Ĕ	Oxidation - Reduction, of my Disselved Brytain, ppm 99.2 /C	23 200 2200 2200
	Turkide	2.3 <u>1180 3200</u> <u>3200</u>
		tion of the control o
	Analytical Parameter / I Field Preservation Volume	✓ E Sample Sample Bottle IOs
Sample Collection Requirements (/ # Require ments	Filtered Method Required	
훝	(TOD) (C) 3x40	11 / 17,6,027,01
<u> </u>	SVCA ACC ACC	
lequire Location)	Pee/PCB 40C Inorganies HNO,	
2	Explosives 4°C	
on F	TPH H S0	
<b>3</b> 3	Narate Hisp	//,/,
	Notes:	
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Andrew Company of the 
	GROUNDWATER SAMPLE FIEL	
	spece	of Interest
	pject Number: 02530.05 Date:	0// // 7
	17-0	eture of Sampler: Man Todas
Tim	ne: Start: 1/00 End: 1300 Sign:	eture of Sampler:
Date	Well Depth	Riser Stict-upPt. ProtectivePt. Casing Well Difference ProtectivePt. Casing
Waier Level/Well Data	Depth to Water 3/ Pt. Well Material: Well Locked?: WellYesYesNo	Dia2 inch
Water	Height of Water Column X	Well integray: Yes No Prot. Casing Secure
uon	Purning/Sampling Equipment Used:	Cocontamination Fluids Used:
Equipment Documentation	Purging Sampling Peristablic Pump Submersible Pump Baller PVC'Silicon Tubing Teflor/Silicon Tubing Airst Hand Pump In-line Filter Press/Vac Filter	( / All That Apply at Location)  Methanol (100%)  26% Methanol/75% ASTM Type II water  Quionized Water  Liquinox Solution  Hexane  HNO_FO.I. Water Solution  Potable Water  None
ą	Ambient Air VOCppm Well Mouthppm Faid Data Collecte	in ConseinerColoredOdor
Fleid Analysis Data	Purge Data # Gal. # Gal. # Gal. # Gal. #	$ \begin{array}{c ccccc} 6 & \text{Gal.} & & & & & & & & & & & & & \\ \hline 29.9 & & & & & & & & & & & & & & \\ \hline 29.9 & & & & & & & & & & & & \\ \hline 29.9 & & & & & & & & & & \\ \hline 29.9 & & & & & & & & & \\ \hline 200 & & & & & & & & & \\ \hline 200 & & & & & & & & & \\ \hline 200 & & & & & & & & & \\ \hline 200 & & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & & & & \\ \hline 200 & & & $
		Sample Sottle IDs lected
ion Requirer a the Locatory 5	SVOA	\( \frac{12}{12}, \frac{6}{12}, \frac{028}{028}, \frac{01}{01} \\ \frac{1}{12},
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#### **APPENDIX B**

## SUMMARY OF DETECTIONS TABLES (CONTRACT LABORATORY)

Table B-1	Summary of Positive Detections in Surface Soil Analytical Results
Table B-2	Summary of Positive Detections in Subsurface Soil Analytical Results
Table B-3	Summary of Positive Detections in Groundwater Analytical Results
	Table B-3.1 Groundwater (Monitoring Wells)
	Table B-3.2 DPT Screening
Table B-4	Summary of Detections in Surface Water Analytical Results
Table B-5	Summary of Detections in Sediment Analytical Results
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## TABLE B-1

SUMMARY OF POSITIVE DETECTIONS IN SURFACE SOIL ANALYTICAL RESULTS

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		T	SCTL for	RBC for	RBC for Indust	rial						Ī —			
	Backgro	und	Residential Soil	Residential Soil	Soil		17B0080	)1	17B01801	17B019	01	17B023	301	17B02301D	17B0240
Sampling Date	121						4/26/95	;	4/25/95	4/26/9	5	5/26/9	)5	5/26/95	5/26/95
Feet bis	-						1		1	0.5-1.	5	1		1	1
Volatile Organics, μg/kg	V.										Г				<u>-</u> -
Acetone	ş.		770,000	7.800,000 n	200,000,000	n					<del>                                     </del>	7	J		
Xylene (total)	6	İ	290,000	16,000,000 n	1,000,000,000	n				53		†	Ť		
Semivolatile Organics, µg/kg													<b>†</b>		
1-Methylnaphthalene			290.000	ND	ND		NA		NA	NA	İ	NA		NA	NA
2-Methylnaphthalene			1,500,000	3,100,000 n	82,000,000	n		寸		110	.1			<del></del>	10/3
Acenaphthene	Š	I	2,300,000	4,700,000 n	120,000,000	n					-	150			
Acenaphthylene		١. ١	1,100,000	ND	ND		NA	$\dashv$	NA	NA	-	NA	-	NA	NA
Anthracene		İ	19,000,000	23,000,000 n	610,000,000	n					-	14/1	$\vdash$	14/	INA
Benzo(a)anthracene		Ī	1,400	880 c	7,800	С		1				240	<del>                                     </del>		
Benzo(a)pyrene		Ī	100	88 c	780	С		$\dashv$				2-10	-		
Benzo(b)fluoranthene			1,400	880 c	7,800						-	180	-		
Benzo(g,h,i)perylene	J.,		2,300,000	2,300,000	61,000,000			$\dashv$			-	100	-		
Benzo(k)fluoranthene			15,000	8,800 c	78,000	c		_				140			
Butylbenzylphthalate			15,000,000	16,000,000 n	410,000,000			+				140	-		
Carbazole			53,000	32,000 c	290,000			+					-		
Chrysene			140,000	88,000 c	780,000							210			
Dibenz(a,h)anthracene			100	88 c	780			-1				210			
Dibenzofuran		T	270,000	310,000 n	82,000,000			$\dashv$			$\vdash$		-		
luoranthene			2,800,000	3,100,000 n	82,000,000	_	130 J	-+	170 J			580			
luorene		1	2,100,000	3,100,000 n	82,000,000			$\dashv$	- 110		$\dashv$	300	-		
ndeno(1,2,3-cd)pyrene		$\top$	1,500	880 c	7,800			-+			$\dashv$				
Naphthalene		$\top$	1,000,000	3,100,000 n	82,000,000			+					NA		
Phenanthrene		7	1,900,000	2,300,000 n	61,000,000			+	110 J			290			
Pyrene			2,200,000	2,300,000 n	61,000,000		140 J	+	110 J			120			
Pesticides, µg/kg		1			3.,000,000	+	1703	$\dashv$	1103		-	120	J		
,4'-DDD		+	4,500	2,700 c	24,000	_		-			$\dashv$				
,4'-DDE			3,200	1,900 c	17,000			+		5			-		
,4'-DDT			3,200	1.900 c	17,000			+		- 5	-+	9	J	8 J	7 J
Ipha-Chlordane		+	3,000	490 C	4,400			+				440	_	·	12 J
Dieldrin		+	70	40 c	360			+			$\dashv$	110 17	שו	95 D	7 2 J

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

	T	SCTL for	RBC for	RBC for Industri	ai						4=0000	.	47000004		17B02401
Identifier	Background	Residential Soil	Residential Soil	Soil	4	17B00801	-+-	7B01801	17B0190		17B023		17B02301	니	
Sampling Date						4/26/95		4/25/95	4/26/95		5/26/9	5	5/26/95		5/26/95
Feet bis	+				$\bot$	1		1	0.5-1.5		1		1	+	1
Endrin ketone		ND	23,000 n	610,000 r	n		_						400	+	5.8 J
gamma-Chlordane		3,000	490 c	4,400	С		_ _			_	120		100 [	<del>'</del>	5.0 J
Heptachlor		10	140 c	1,300	С				_		7.8		8.9	-+	
Inorganics, mg/kg							<u> </u>				0.000		2,460	$\dashv$	1,040
Aluminum	4,890	72,000	78,000 n	1,000,000	_	1,080	ᆜ	5,400 J	538		2,280		0.73	<del>.</del>	1,040 1.4 B
Arsenic	1.9	0.8	0.43 /23 c/					0.7 B			34620				7.5 B
Barium	21.6	105	5,500 n	140,000		2.3 B		6.6 B		В	6.6	-	7.3		0.1 B
Beryllium	0.46	120.0	0.15 c	1.3			_ _	0.08 B			0.02	R	0.02	В	1.3
Cadmium	ND	75	39 n	1,000	n				<del> </del>	<del>                                     </del>		┡	40.000	$\dashv$	235,000
Calcium	33,568	ND	1,000,000	1,000,000		745 J		3,200 J	226		21,400	+	19,600	$\dashv$	7.7
Chromium	7.7	290	390 n	10,000		1.6 B	3	5.2 J	0.79	В	5.1	<del> </del>	6.2	$\dashv$	0.93 B
Cobalt	ND	4,700	4,700,000 n	120,000,000					<del></del>	<u> </u>		<del> </del>		_	9
Copper	2.6	105	3,100 n	82,000	-	0.7 B			0.46	╄	6.1		5	В	632
Iron	843	23,000	23,000 n	610,000	n	155 J	<u> </u>	312 J			497		477		39.7 J
Lead	21.3	500	400	400		2.1		6.6	0.8		23.6		25.4 179		1700
Magnesium	381	ND	460,468	460,468	L	19.5 B		66.6			190	-	8.4	Р	18.8
Manganese	10.8	1,600	1,800 n		_	1.7 E	<del></del>	2.4	0.6	В	7.4				0.07
Mercury	0.05	3.7	23 n		$\vdash$	0.0 E	3	0.1			0.03	B	0.03	D	0.07
Silver	ND .	390	390 n				-	57.5		-	-	ВВ	10.2		75 B
Sodium	ND	ND	1,000,000	1,000,000						_	9.0		10.2	-	73 5
Thallium	ND	ND	6.3 n		<del> </del>				0.7	<del>-</del> -	<del> </del>	7 B	3.4	<u> </u>	15.4
Vanadium	4.9	15	550 n		+	0.9 E	B	2.1		+	11.		15.4		20.1
Zinc	4.6	23,000	23,000 n	610,000	n	11.4	+	4.0	1.7	IB.	11.	<del>'</del>  -	15.4		20.1
General chemistry, mg/kg					_		-			-	110	+	95		28
Total Petroleum Hydrocarbons	ND	ND	ND	ND	<u> </u>	6		23		1	1 111	ـــــــــــــــــــــــــــــــــــ	1 30	لــــا	20

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for	RBC for Industrial						
	Background	Residential Soil	Residential Soil	Soil	17B02501	17B03401	17B03501	17B03601	17B05001	17B05301
Sampling Date					5/26/95	5/26/95	5/26/95	5/26/95	11/21/97	11/24/97
Feet bis					1	1	1	1	1-2	1-2
Volatile Organics, μg/kg									•	
Acetone		770,000	7,800,000 n	200,000,000 n	9 J		13 J	8 J	NA	NA
Xylene (total)		290,000	16,000,000 n	1,000,000,000 n					NA	NA
Semivolatile Organics, µg/kg										
1-Methylnaphthalene		290,000	ND	ND	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene		1,500,000	3,100,000 n	82,000,000 n			140 J			
Acenaphthene		2,300,000	4,700,000 n	120,000,000 n			1,500		42	
Acenaphthylene		1,100,000	ND	ND	NA	NA	NA	NA	NA	NA
Anthracene		19,000,000	23,000,000 n	610,000,000 n			2,600	90 J		
Benzo(a)anthracene		1,400	880 c	7,800 c			9,000 D	340 J	27	12
Benzo(a)pyrene		100	88 c	780 c			8,100 D	₩3.300 J	26	23
Benzo(b)fluoranthene		1,400	880 c	7,800 c			1.7,200 D	320 J	54	42
Benzo(g,h,i)perylene		2,300,000	2,300,000	61,000,000			6,400 D	220 J	56	44
Benzo(k)fluoranthene		15,000	8,800 c	78,000 c			2,400	250 J	13 PF	18
Butylbenzylphthalate		15,000,000	16,000,000 n	410,000,000 n				460	NA	NA
Carbazole		53,000	32,000 c	290,000 с			1,700			
Chrysene		140,000	88,000 c	780,000 c			9,300 D	380	42	22
Dibenz(a,h)anthracene		100	88 c	780 c			2,500	MARKET 1		10 PF
Dibenzofuran		270,000	310,000 n	82,000,000 n			630			
Fluoranthene		2,800,000	3,100,000 n	82,000,000 n			13,000 D	710	64	22
Fluorene		2,100,000	3,100,000 n	82,000,000 n			1,400			
Indeno(1,2,3-cd)pyrene		1,500	880 c	7,800 c			- 6,900 D	170 J		20 PF
Naphthalene		1,000,000	3,100,000 n	82,000,000 n			210 J		39	
Phenanthrene		1,900,000	2,300,000 n	61,000,000 n			11,000 D	440		
Pyrene		2,200,000	2,300,000 n	61,000,000 n			16,000 D	640	74	24
Pesticides, μg/kg								<del></del>		
4,4'-DDD		4,500	2,700 c	24,000 c			2.600 C	8	NA	NA
4,4'-DDE		3,200	1,900 c	17,000 c			430	6 J	NA NA	NA NA
4,4'-DDT		3,200	1,900 c	17,000 c			1,700 C	13	. NA	NA.
alpha-Chlordane		3,000	490 c	4,400 c			260	4 J	, NA	NA NA
Dieldrin		70	40 c	360 c	11			5 J	NA NA	NA NA

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for	RBC for Industria	ai						.=5.000		47005004	17B05301
ldentifier	Background	Residential Soil	Residential Soil	Soil		17B0250	1	17B0340			17B0360	<del></del> +	17B05001	11/24/97
Sampling Date					$\bot$	5/26/95	_	5/26/95	5/26/9	5	5/26/95	-	11/21/97	
Feet bis					_	1		1	11_	_	1	-	1-2	1-2
Endrin ketone		ND	23,000 n	610,000 n	1		_						NA	NA
gamma-Chlordane		3,000	490 c	4,400 c	2		_		320		5	_	NA	NA
Heptachlor	1 1	10	140 c	1,300 c	c		_			_	ļ		NA	NA NA
Inorganics, mg/kg	1				$\perp$		_			_				
Aluminum	4.890	72,000	78,000 n	1,000,000 n	n	1,550	J	1,200			1,980	_	NA _	NA NA
Arsenic	1.9	0.8	0.43 /23 c/r	3.8 /610 c	c/			0.53			0.46	-	NA	NA NA
Barium	21.6	105	5,500 n	140,000 n	n	3.3	В	5.2		<b></b>	6.1	B	NA	NA NA
Beryllium	0.46	120.0	0.15 c	1.3	c		_		0.15	В		_	NA	NA NA
Cadmium	ND	75	39 n	1,000 r	n					<del> </del> _			NA	NA NA
Calcium	33,568	ND	1,000,000	1,000,000		629		3,910	88,200		5,270	_	NA	NA NA
Chromium	7.7	290	390 n	10,000 r	n	1.8	В	1.6	3 22.7	_	2.8		NA	NA
Cobalt	ND	4,700	4,700,000 n	120,000,000 r	n					_			NA	NA NA
Copper	2.6	105	3,100 n	82,000 г	n		_		7.9	+			NA NA	NA NA
Iron	843	23,000	23,000 n	610,000 г	n	236		332		+-	563		NA	NA NA
Lead	21.3	500	400	400	_1	0.9	_	3.6		-	16.5		NA NA	NA NA
Magnesium	381	ND	460,468	460,468		51.4		96.6			80.6		NA NA	NA NA
Manganese	10.8	1,600	1,800 n	47,000	n	1,1	В	5.5	47.7	-	2.6		NA	NA NA
Mercury	0.05	3.7	23 n	610	n				0.08	3	0.03	В	NA NA	NA NA
Silver	ND	390	390 n	10,000	_					1			NA NA	NA NA
Sodium	ND	ND	1,000,000	1,000,000	_				47.	7   B	ļ	<u> </u>	NA NA	NA NA
Thallium	ND	ND	6.3 n	160						1_	<del> </del>	<u> </u>	NA NA	
Vanadium	4.9	15	550 n	14,000		2.5	_	3.1		₽ B	4.8	<del></del>	NA	NA NA
Zinc	4.6	23,000	23,000 n	610,000	n	0.89	В	2.7	B 32.	7 -	6.2	├-	NA NA	NA
General chemistry, mg/kg							<u> </u>			-	<del> </del>	<del> </del>		NA
Total Petroleum Hydrocarbons	ND	ND	ND	ND		29	<u> </u>	58	9:	9	9		NA	NA

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for	RBC for Industri	al		1			T	
Identifier	Background	Residential Soil	Residential So	Soil	17B05401	17S04801	17S04901	17805001	17S05001D	1780510	01
Sampling Date		İ			11/24/97	11/21/97	11/21/97	11/21/97	11/21/97	11/21/9	7
Feet bis					1-2	0-1	0-1	0-1	0-1	0-1	_
Volatile Organics, μg/kg											Γ
Acetone		770,000	7,800,000 n	200,000,000 r	NA	NA	NA	NA	NA	NA	
Xylene (total)		290,000	16,000,000 n	1,000,000,000 r	NA	NA	NA	NA	NA	NA	Γ
Semivolatile Organics, µg/kg											Γ
1-Methylnaphthalene		290,000	ND	ND	NA	NA	NA	NA	NA	NA	Γ
2-Methylnaphthalene		1,500,000	3,100,000 n	82,000,000 r							一
Acenaphthene		2,300,000	4,700,000 n	120,000,000 r			38		3,000	190,000	Γ
Acenaphthylene		1,100,000	ND	ND	NA	NA	NA	NA	NA	NA	$\vdash$
Anthracene		19,000,000	23,000,000 n	610,000,000 r			1	1	11		1
Benzo(a)anthracene		1,400	880 c	7,800 0	32		4 PI	F 1,700	980	\$57,000	Γ
Benzo(a)pyrene		100	88 c	780 0	29		8	131,700		848,000	Ι-
Benzo(b)fluoranthene		1,400	880 c	7,800 c	34		10	4.700		\$47,000	Г
Benzo(g,h,i)perylene		2,300,000	2,300,000	61,000,000	43		11	1,000		24,000	┢
Benzo(k)fluoranthene		15,000	8,800 c	78,000 c	15		5	820		-21,000	Γ
Butylbenzylphthalate		15,000,000	16,000,000 n	410,000,000 n	NA	NA	NA	NA	NA	NA	
Carbazole		53,000	32,000 c	290,000 c							
Chrysene		140,000	88,000 c	780,000 c	29		12	1,600	930	50,000	_
Dibenz(a,h)anthracene		100	88 C	780 C				7 270 PF		S MED	PI
Dibenzofuran		270,000	310,000 n	82,000,000 n						2.8630.894	
Fluoranthene		2,800,000	3,100,000 n	82,000,000 n	35		17	3,700	2,100	160,000	
Fluorene		2,100,000	3,100,000 n	82,000,000 n							
Indeno(1,2,3-cd)pyrene		1,500	880 c	7,800 c				280 PF			
Naphthalene		1,000,000	3,100,000 n	82,000,000 n							
Phenanthrene		1,900,000	2,300,000 n	61,000,000 n				3,300 PF		120,000	
Pyrene		2,200,000	2,300,000 n	61,000,000 n	52	56	23	3,900	1,800	100,000	
Pesticides, µg/kg									1		
4,4'-DDD		4,500	2,700 c	24,000 c	NA	NA	NA	NA	NA NA	NA	
4,4'-DDE		3,200	1,900 c	17,000 c	NA	NA	NA	NA	NA	NA	
4,4'-DDT		3,200	1,900 c	17,000 c	NA	NA	NA	NA	. NA	NA	
alpha-Chlordane		3,000	490 c	4,400 c	NA	NA	NA	NA NA	NA NA	NA NA	_
Dieldrin		70	40 c	360 c	NA	NA	NA	NA NA	NA NA	NA	_

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for		RBC for Industria	al			1			
identifier	Background	Residential Soil	Residential S	Soil	Soil		17805401	17S04801	17S04901	17S05001	17S05001D	17505101
Sampling Date							11/24/97	11/21/97	11/21/97	11/21/97	11/21/97	11/21/97
Feet bis							1-2	0-1	0-1	0-1	0-1	0-1
Endrin ketone		ND	23,000	n	610,000 n	1	NA	NA	NA	NA	NA NA	NA
gamma-Chlordane		3,000	490	С	4,400 c		NA	NA	NA	NA	NA NA	NA
Heptachlor		10	140	С	1,300 c	:	NA	NA NA	NA NA	NA	NA	NA
Inorganics, mg/kg						$\perp$						
Aluminum	4,890	72,000	78,000	n	1,000,000 n	1	NA	NA NA	NA NA	NA	NA	NA
Arsenic	1.9	0.8	0.43 /23	c/n	3.8 /610 0	1	NA	NA NA	. NA	NA NA	NA NA	NA
Barium	21.6	105	5,500	n	140,000 n	1	NA	NA	NA NA	NA NA	NA	NA
Beryllium	0.46	120.0	0.15	С	1.3 0	: ]	NA	NA	NA .	NA NA	NA NA	NA
Cadmium	ND	75	39		1,000 r	1	NA _	NA	NA NA	NA NA	NA NA	NA
Calcium	33,568	ND	1,000,000	<u> </u>	1,000,000		NA	NA NA	NA NA	NA NA	NA NA	NA
Chromium	7.7	290	390	n	10,000 г	1	NA	NA	NA	NA NA	NA	NA NA
Cobalt	ND	4,700	4,700,000	n	120,000,000	1	NA	NA	NA NA	NA NA	NA NA	NA NA
Copper	2.6	105	3,100	n	82,000 r		NA	NA NA	NA NA	NA NA	NA	NA
Iron	843	23,000	23,000	n	610,000 r	n	NA	NA NA	NA	NA NA	NA	NA
Lead	21.3	500	400	L	400	_	NA	NA NA	NA	NA	NA NA	NA
Magnesium	381	ND	460,468		460,468	_	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
Manganese	10.8	1,600	1,800	n	47,000 r		NA	NA	NA NA	NA	NA NA	NA
Mercury	0.05	3.7	23	n	610 r		NA	NA	NA	NA NA	NA NA	NA NA
Silver	ND	390	390	4	10,000	n	NA	NA NA	NA	NA NA	NA NA	NA NA
Sodium	ND	ND	1,000,000		1,000,000	_	NA	NA	NA NA	NA	NA NA	NA
Thallium	ND	, ND	6.3	-	160 r		NA NA	NA	NA	NA NA	NA NA	NA NA
Vanadium	4.9	15	550	n	14,000		NA	NA	NA NA	NA NA	NA NA	NA
Zinc	4.6	23,000	23,000	n	610,000	n	NA	NA NA	NA NA	NA	NA _	NA _
General chemistry, mg/kg		,				$\Box$					<del> </del>	<del>  -</del> -
Total Petroleum Hydrocarbons	ND	ND	ND	1	ND		NA	NA NA	NA	NA NA	NA	NA

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for	RBC for Industr	ial		T				1		1
Identifier	Background	d Residential Soil	Residential Soil	Soil		7S05201	178053	01	178054	01	1750560	17S05701	17S05801
Sampling Date		-			1	1/21/97	11/24/9	97	11/24/9	37	11/17/98	11/17/98	11/17/98
Feet bls						0-1	0-1		0-1		0-1	0-1	0-1
Volatile Organics, μg/kg							<u> </u>			Γ			
Acetone		770,000	7,800,000 n	200,000,000	n	NA	NA		NA	<u> </u>	NA	NA	NA
Xylene (total)		290,000	16,000,000 n	1,000,000,000	n	NA	NA		NA		NA	NA	NA
Semivolatile Organics, µg/kg										<u> </u>			
1-Methylnaphthalene		290,000	ND	ND		NA	NA		NA				
2-Methylnaphthalene		1,500,000	3,100,000 n	82,000,000	1								
Acenaphthene		2,300,000	4,700,000 n	120,000,000	n .	1,200	260		770				
Acenaphthylene		1,100,000	ND	· ND		NA	NA		NA				
Anthracene		19,000,000	23,000,000 n	610,000,000	1								
Benzo(a)anthracene		1,400	880 c	7,800	:	410	83		270		330	1024200	14
Benzo(a)pyrene		100	88 c	780	3	420	120		62	PF	S <b>25: 43</b> 0	\$ 2.500	55
Benzo(b)fluoranthene		1,400	880 c	7,800	:	500	140	•	270		430	252,200	24
Benzo(g,h,i)perylene		2,300,000	2,300,000	61,000,000		400	110			_	330	1,600	36
Benzo(k)fluoranthene		15,000	8,800 c	78,000	:	240	57		67	PF	220	1,200	17
Butylbenzylphthalate		15,000,000	16,000,000 n	410,000,000 r	1	NA	NA		NA		NA	NA	NA
Carbazole		53,000	32,000 c	290,000	;						NA	NA	NA
Chrysene	1 .	140,000	88,000 c	780,000	;	390	100		250		340	2,100	16
Dibenz(a,h)anthracene		100	88 c	780	;	54 PF	26	PF	57	PF		·	
Dibenzofuran		270,000	310,000 n	82,000,000 r	1						NA	NA	NA
Fluoranthene		2,800,000	3,100,000 n	82,000,000 r	<u>ا</u> ا	900	210		530		780	6,000	15
Fluorene		2,100,000	3,100,000 n	82,000,000 r	1								
Indeno(1,2,3-cd)pyrene		1,500	880 c	7,800 c	;	360	58		35	PF	290		
Naphthalene		1,000,000	3,100,000 n	82,000,000 r	1		98						
Phenanthrene		1,900,000	2,300,000 n	61,000,000 r	1				390				
Pyrene		2,200,000	2,300,000 n	61,000,000 r	1	630	160		630		550	4,300	17
Pesticides, µg/kg													
4,4'-DDD		4,500	2,700 c	24,000	:	NA	NA		NA		NA	NA	NA
4,4'-DDE		3,200	1,900 c	17,000 c	;	NA	NA		NA		NA	NA	NA
4,4'-DDT		3,200	1,900 c	17,000	;	NA	NA		NA		NA	NA NA	NA
alpha-Chlordane		3,000	490 c	4,400 c		NA	NA		NA		NA	NA	NA
Dieldrin		70	40 c	360 c		NA	NA		NA		NA	NA	NA

Appendix B

Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for		RBC for Industria	ai				47005004	17S05701	17S05801
Identifier	Background	Residential Soil	Residential S	oil	Soil	1	17S05201	17S05301	17S05401	17S05601	11/17/98	11/17/98
Sampling Date						_	11/21/97	11/24/97	11/24/97	11/17/98	0-1	0-1
Feet bis							0-1	0-1	0-1	0-1	NA NA	NA NA
Endrin ketone		ND	23,000	n	610,000 r	1	NA	NA NA	NA	NA NA	L	NA NA
		3,000	490	С	4,400	:	NA	NA	NA	NA NA	NA NA	NA NA
gamma-Chlordane		10	140	С	1,300	;	NA	NA	NA	NA NA	NA	INA
Heptachlor								<u> </u>				NA
Inorganics, mg/kg	4.890	72,000	78,000	n	1,000,000 1	n	NA	NA	NA	NA NA	NA _	<del></del>
Aluminum	1.9	0.8	0.43 /23	c/n	3.8 /610	ď	NA	NA	NA	NA NA	NA	NA NA
Arsenic	21.6	105	5,500	+	140,000	n	NA	NA	NA	NA NA	NA NA	NA NA
Barium	0.46	120.0	0.15		1.3	С	NA	NA	NA	NA NA	NA	NA _
Beryllium	ND	75	39		1,000	n	NA	NA	NA	NA	NA NA	NA NA
Cadmium		ND ND	1.000.000		1,000,000		NA	NA	NA	NA	NA NA	NA NA
Calcium	33,568	290	390	+	10,000	n	NA	NA	NA	NA NA	NA NA	NA NA
Chromium	<del> </del>	4,700	4,700,000	+	120,000,000	n	NA	NA	NA	NA	NA NA	NA NA
Cobalt	ND	105	3,100		82,000		NA	NA	NA	NA	NA	NA NA
Copper	2.6		23,000		610,000		NA	NA	NA	NA	NA	NA
Iron	843	23,000	400	+	400	Ë	NA	NA	NA	NA	NA	NA NA
Lead	21.3	500	460,468		460,468	_	NA	NA NA	NA	NA	NA	NA _
Magnesium	381	ND			47,000	2	NA	NA	NA	NA	NA	NA
Manganese	10.8	1,600	1,800		610	<b>├</b>	NA NA	NA	NA	NA	· NA	NA
Mercury	0.05	3.7		3 n	10,000	-	NA NA	NA	NA	NA	NA	NA
Silver	ND	390	390		1,000,000	"	NA NA	NA NA	NA	NA	NA	NA
Sodium	ND	ND	1,000,000	-+-	1,000,000	-	NA NA	NA NA	NA NA	NA	NA	NA
Thallium	ND	ND		3 n		-	NA NA	NA NA	NA NA	NA	NA	NA
Vanadium	4.9	15	_ <del></del>	0 n	14,000	-	NA NA	NA NA	NA NA	NA	NA	NA
Zinc	4.6	23,000	23,000	U n	610,000	lu l	144	1	<del>                                     </del>	1		
General chemistry, mg/kg					1.5	-	NA NA	NA	NA	NA NA	NA	NA
Total Petroleum Hydrocarbons	ND	ND	NI	D	ND	1_	IAY	14/	1 100			

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for	RBC for Industria	al		T			Ţ
	Backgroun	d Residential Soil	Residential Soil	Soil	17805901	17S06001	17S06101	17S06201	17506301	17S0640
Sampling Date					11/17/98	11/17/98	11/17/98	11/17/98	11/17/98	11/17/98
Feet bis					0-1	0-1	0-1	0-1	0-1	0-1
Volatile Organics, µg/kg										
Acetone		770,000	7,800,000 n	200,000,000 n	NA	NA	NA	NA	NA	NA
Xylene (total)		290,000	16,000,000 n	1,000,000,000 n	NA	NA	NA	NA	NA	NA
Semivolatile Organics, µg/kg										
1-Methylnaphthalene		290,000	ND	ND						
2-Methylnaphthalene		1,500,000	3,100,000 n	82,000,000 n						<b> </b>
Acenaphthene		2,300,000	4,700,000 n	120,000,000 n						
Acenaphthylene		1,100,000	ND	ND						
Anthracene		19,000,000	23,000,000 n	610,000,000 n						<del>  -</del>
Benzo(a)anthracene		1,400	880 c	7,800 c	210		£10,000	W 3.000	E45(000)	(E) (E) (E)
Benzo(a)pyrene		100	88 c	780 c	680	28	14,000		20,000	95 5,500
Benzo(b)fluoranthene		1,400	880 c	7,800 c	610	17	12,000		220,000	BEST 400
Benzo(g,h,i)perylene		2,300,000	2,300,000	61,000,000	610	15	8,700	2,700	13,000	4,100
Benzo(k)fluoranthene		15,000	8,800 c	78,000 c	300	7	6,100	1,900	9,500	le azon
Butylbenzylphthalate		15,000,000	16,000,000 n	410,000,000 n	NA	NA	NA	NA	NA	NA
Carbazole		53,000	32,000 c	290,000 c	NA	NA	NA	NA	NA	NA
Chrysene		140,000	88,000 c	780,000 c	240	8	11,000	3,100	17,000	6,700
Dibenz(a,h)anthracene		100	88 c	780 c				-		5,755
Dibenzofuran		270,000	310,000 n	82,000,000 n	NA	NA	NA	NA	NA	NA
Fluoranthene		2,800,000	3,100,000 n	82,000,000 n	230		27.000	7,400	46,000	19,000
Fluorene		2,100,000	3,100,000 n	82,000,000 n		1				.0,000
Indeno(1,2,3-cd)pyrene		1,500	880 c	7,800 c	570		-7/7/00		<b>24000</b>	
Naphthalene		1,000,000	3,100,000 n	82,000,000 n			**************************************		Strafasem Joshobush	hinakisille kili dhedhish
Phenanthrene		1,900,000	2,300,000 n	61,000,000 n			1			
Pyrene		2,200,000	2,300,000 n	61,000,000 n	370	13	19,000	5,100	29,000	12,000
Pesticides, µg/kg						<del>                                     </del>	1			,000
4,4'-DDD		4,500	2,700 с	24,000 c	NA	NA	NA	NA NA	NA NA	NA
4,4'-DDE		3,200	1,900 c	17,000 c	NA	NA	NA	NA NA	NA NA	NA NA
4,4'-DDT		3,200	1,900 c	17,000 c	NA	NA	NA	NA NA	, NA	NA NA
alpha-Chlordane		3,000	490 c	4,400 c	NA	NA	NA.	NA NA	NA NA	NA NA
Dieldrin		70	40 c	360 c	NA	NA	NA	NA NA	NA NA	NA NA

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for		RBC for Industri	ial	47005001	17S06001	17S06101	17S06201	17S06301	17S06401
Identifier	Background	Residential Soil	Residential S	Soil	Soil		17/505901	11/17/98	11/17/98	11/17/98	11/17/98	11/17/98
Sampling Date				_				0-1	0-1	0-1	0-1	0-1
Feet bis						_	0-1	NA NA	NA	NA	NA	NA
ndrin ketone		. ND	23,000	+	610,000	_	NA NA	NA NA	NA NA	NA	NA	NA
amma-Chlordane		3,000	490	+	4,400		NA NA	NA	NA NA	NA	NA	NA
Heptachlor		10	140	C	1,300	C	IVA	10/	<del>                                     </del>			
norganics, mg/kg				-		_	NA	NA	NA	NA	NA	NA
Aluminum	4,890	72,000	78,000	-	1,000,000		NA NA	NA NA	NA NA	NA	NA	NA
Arsenic	1.9	0.8	0.43 /23				NA NA	NA NA	NA NA	NA	NA	NA
Barium	21.6	105	5,500	-	140,000		NA NA	NA NA	NA	NA	NA	NA
Beryllium	0.46	120.0	0.15		1.3	₩	NA NA	NA NA	NA	. NA	NA	NA
Cadmium	ND	75		9 n	1,000	+	NA NA	NA NA	NA	NA	NA	NA
Calcium	33,568	ND	1,000,000		1,000,000	+	NA NA	NA NA	NA	NA	NA	NA
Chromium	7.7	290		0 n	10,000	+	NA NA	NA NA	NA	NA	NA	NA
Cobalt	ND	4,700	4,700,000		120,000,000	+	NA NA	NA NA	NA	NA	NA	NA
Copper	2.6	105	3,10		610,000		NA NA	NA NA	NA	NA	NA	NA
iron	843	23,000	23,00		400	+-	NA NA	NA NA	NA	NA	. NA	NA
Lead	21.3	500	40		460,468	-1-	NA NA	NA	NA	NA	. NA	NA
Magnesium	381	ND	460,46		47,000		NA NA	NA	NA	NA	NA	NA
Manganese	10.8	1,600	1,80		47,000		+	NA	NA	NA	NA	NA
Mercury	0.05	3.7		3 n	10.000		NA NA	NA	NA	NA	NA	NA
Silver	ND	390		0 n	1,000,000		NA NA	NA NA	NA	NA	NA	NA NA
Sodium	ND	ND	1,000,00		1,000,000			NA NA	NA	NA	NA	NA
Thallium	ND	ND		.3 n	14,000	+-		NA NA	NA	NA	NA	NA NA
Vanadium	4.9	15		50 n	610,000			NA	NA	NA	NA	NA
Zinc	4.6	23,000	23,00	חוטע	810,000	<del>'</del>	+	1 - 1				
General chemistry, mg/kg				10	N		NA	NA	NA	NA	NA	NA.
Total Petroleum Hydrocarbons	ND	ND	l N	ID								

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for	RBC for Industri	ial			
Identifier	Background	Residential Soil	Residential Soil	Soil		17S06401D	17S06501	17S06601
Sampling Date						11/17/98	11/17/98	11/17/98
Feet bis						0-1	0-1	0-1
Volatile Organics, μg/kg					$\top$			
Acetone		770,000	7,800,000 n	200,000,000	n	NA	NA	NA
Xylene (total)		290,000	16.000,000 n	1,000,000,000 r	n	NA	NA	NA NA
Semivolatile Organics, µg/kg					$\top$			
1-Methylnaphthalene		290,000	ND	ND				
2-Methylnaphthalene		1,500,000	3,100,000 n	82,000,000 r	1	——————————————————————————————————————		
Acenaphthene		2,300,000	4,700,000 n	120,000,000 r	_			
Acenaphthylene		1,100,000	ND	ND	$\top$		-	
Anthracene		19,000,000	23,000,000 n	610,000,000 r	,			
Benzo(a)anthracene		1,400	880 c	7,800 0	-	34,000		
Benzo(a)pyrene		100	88 c	780 0	38.7	29,000		13
Benzo(b)fluoranthene		1,400	880 c	7,800 c		32,000		8
Benzo(g,h,i)perylene		2,300,000	2,300,000	61,000,000		18,000		
Benzo(k)fluoranthene		15,000	8.800 c	78.000 c		16,000		5
Butylbenzylphthalate		15,000,000	16,000,000 n	410,000,000 n		NA	NA NA	NA NA
Carbazole		53,000	32,000 c	290,000 c	-	NA NA	NA NA	NA NA
Chrysene		140,000	88,000 c	780,000 c		33,000	140	IVA
Dibenz(a,h)anthracene		100	88 c	780 c		00,000		
Dibenzofuran		270,000	310,000 n	82,000,000 n		NA	NA	NA
Fluoranthene		2,800,000	3,100,000 n	82,000,000 n		100.000	144	
luorene		2,100,000	3,100,000 n	82,000,000 n	-	.00,000		
ndeno(1,2,3-cd)pyrene		1,500	880 c	7,800 c		17,000		7
Naphthalene		1,000,000	3,100,000 n	82,000,000 n				
Phenanthrene		1,900,000	2,300,000 n	61,000,000 n				
yrene		2,200,000	2,300,000 n	61,000,000 n		68,000		7
Pesticides, µg/kg			, ,	2.,550,000	+	20,000		<del>'</del>  -
,4'-DDD		4,500	2,700 c	24.000 c	+-	NA	NA NA	NA
,4'-DDE		3,200	1,900 c	17,000 c		NA NA	NA NA	NA NA
,4'-DDT		3,200	1,900 c	17,000 c	<del>-</del>	NA NA	NA NA	
lpha-Chlordane		3,000	490 c	4,400 c	-	NA NA	NA NA	NA NA
Dieldrin		70	40 c	360 c		NA NA	NA NA	NA NA

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Table B-1. Summary of Positive Detections in Surface Soil Analytical Results, Study Area 17

		SCTL for	RBC for		RBC for Indust	rial	_		
Identifier	Background	Residential Soil	Residential S	oil	Soil		17S06401D	17S06501	17S06601
Sampling Date							11/17/98	11/17/98	11/17/98
Feet bis							0-1	0-1	0-1
Endrin ketone		ND	23,000	n	610,000	n	NA	NA	NA
gamma-Chlordane		3,000	490	С	4,400	С	NA	NA	NA NA
Heptachlor		10	140	C	1,300	c	NA	NA	NA
inorganics, mg/kg						_			
Aluminum	4,890	72,000	78,000	n	1,000,000	-	NA	NA	NA
Arsenic	1.9	0.8	0.43 /23	c/n	3.8 /610	C/	NA	NA	NA
Barium	21.6	105	5,500	n	140,000	n	NA NA	NA	NA NA
Beryllium	0.46	120.0	0.15	С	1.3	С	NA	NA	NA NA
Cadmium	ND	75	39	n	1,000	n	NA	NA	NA NA
Calcium	33,568	ND	1,000,000		1,000,000	L	NA	NA	NA NA
Chromium	7.7	290	390	n	10,000	n	NA	NA	NA NA
Cobalt	ND	4,700	4,700,000	n	120,000,000	n	NA _	NA NA	NA NA
Copper	2.6	105	3,100	n	82,000	n	NA NA	NA	NA NA
Iron	843	23,000	23,000	n	610,000	n	NA NA	NA	NA .
Lead	21.3	500	400		400		NA	NA NA	NA NA
Magnesium	381	ND	460,468		460,468	├	NA	NA	NA
Manganese	10.8	1,600	1,800	n	47,000	+-	NA	NA NA	NA NA
Mercury	0.05	3.7	23	n	610	1	NA NA	NA	NA NA
Silver	ND	390	390	n	10,000		NA NA	NA	NA NA
Sodium	ND	ND	1,000,000	<u>L</u> _	1,000,000		NA	NA NA	NA NA
Thallium	ND	ND	6.3	n	160	ļ.,	NA NA	NA	NA NA
Vanadium	4.9	15	550	n	14,000	n	NA NA	NA	NA
Zinc	4.6	23,000	23,000	n	610,000	n	NA	NA NA	NA NA
General chemistry, mg/kg						_			
Total Petroleum Hydrocarbons	ND	ND	ND		ND	L	NA _	NA	NA

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# Appendix B Table B-1. Notes to Summary of Positive Detections in Surface Soil Analytical Results Study Area 17

Naval Training Center, Orlando Orlando, FL

#### NOTES:

The background screening value is twice the average of detected concentrations for inorganic analytes.

SCTL = Florida Department of Environmental Protection, Soil Cleanup Target Levels, Chapter 62-785 FAC, April 30, 1998.

Values indicated are for direct exposure scenario. Value for chromium is for chromium (IV).

Value for mercury is for inorganic mercury

RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.L. Smith. RBC for chromium is based on chromium VI. RBC for lead is not available; value is Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites (OSWER directive 9355-4-12). For essential nutrients (calcium, magnesium, sodium) screening values were derived based on recommended daily allowances.

RBC for benzo(g,h,i)perylene and phenanthrene are not available, value is based on pyrene.

μg/kg = micrograms per DDE = dichlorodiphenyldichloroethene.

mg/kg = milligrams per DDT = dichlorodiphenyltrichloroethane

n = noncarcinogenic eff DDD = dichlorodiphenyldichloroethane.

c = carcinogenic effects

ND = Not determined

bis = below land surface

- B = Reported concentration is between the instrument detection limit and Contract Required Detection Limit.
- J = Reported concentration is an estimated quantity.
- D = Reported concentrations if from a dilution/reanalysis.
- C = Confirmed by gas chromatography/mass spectroscopy.
- PF = This laboratory qualifier indicates that the reported result is uncertain since the percent difference between the original and confirmation analysis is greater than 50%.

FDEP = Florida Department of Environmental Protection.

OSWER = Office of Solid Waste and Emergency Response.

USEPA = U.S. Environmental Protection Agency

All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight; organics in micrograms per kilogram (µg/kg) soil dry weight.

#### TABLE B-2

SUMMARY OF POSITIVE DETECTIONS IN SUBSURFACE SOIL ANALYTICAL RESULTS

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Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

Identifier	Background	SCTL	RBC fo		RBC for Industrial	17B0010	)1	17B00201	17B00301	17800401	17B00502	17B00701	17B00901
Sampling Date					<u> </u>	5/15/95		5/14/95	5/16/95	5/16/95	5/15/95	4/26/95	4/26/95
Feet bis						4		4	4	4	4	5	3.5
Volatile Organics, µg/kg													
2-Butanone		NA	47,000,00	0 n	1,000,000,000 n				3 J				
Acetone		NA	7,800,00	0 n	200,000,000 n	28	_		23		41	12 J	
Toluene		NA	16,000,00	0 n	410,000,000 n								
Xylene (total)		NA	16,000,00	0 n	1,000,000,000 n								
Semivolatile Organics, µg/kg													
2-Methylnaphthalene	-	NA	3,100,00	0 n	82,000,000 n								
Acenaphthene		NA	4,700,00	0 n	120,000,000 n								
Anthracene		NA	23,000,00	0 n	610,000,000 n					· ·			
Benzo(a)anthracene		NA	. 88	0 c	7,800 c								
Benzo(a)pyrene		NA	8	8 c	780 c								
Benzo(b)fluoranthene		NA	88	0 c	7,800 c								
Benzo(g,h,i)perylene		NA	2,300,00	0	61,000,000								
Benzo(k)fluoranthene	1	NA	8,80	0 c	78,000 c								
Butylbenzylphthalate		NA	16,000,00	0 n	410,000,000 n								
Carbazole		NA	32,00	0 c	290,000 c				fig				
Chrysene		NA	88,00	0 c	780,000 c								
Dibenz(a,h)anthracene		NA	8	8 c	780 c								
Dibenzofuran		NA	310,00	0 n	82,000,000 n								
Fluoranthene		NA	3,100,00	0 n	82,000,000 n								
Fluorene		NA	3,100,00	0 n	82,000,000 n								
Indeno(1,2,3-cd)pyrene		NA	88	0 c	7,800 c								
Naphthalene		NA	3,100,00	0 n	82,000,000 n								
Phenanthrene		NA	2,300,00	0 n	61,000,000 n								
Pyrene		NA	2,300,00	0 n	61,000,000 n								
Pesticides, µg/kg													
4,4'-DDD		NA	2,70	0 c	24,000 c								
4,4'-DDE		NA	1,90	0 c	17,000 c							7.7 J	
4,4'-DDT		NA	1,90		17,000 c		7		2.9 J	1.6 J			
alpha-Chlordane		NA		0 c	4,400 c		1		1 J				
Dieldrin		NA	4		360		$\dashv$					15	

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Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

ldentifier	Background	SCTL	RBC for Residential Soi	RBC for Indust	rial	17B00101	-	17B00201 5/14/95		7B00301 5/16/95	17B004 5/16/9		17B00502 5/15/95	17B0070 4/26/95	<del>-</del>	17B00901 4/26/95
Sampling Date		, -				5/15/95			+	4	3/10/3	-	4	5		3.5
Feet bls						4		4	╁┈	-4-		7-1		7.3	.i	
Endrin ketone		NA	23,000	610,000	+		-		+	1.2 J	<del> </del>	+			-	
gamma-Chlordane		NA	490 c	4,400	<del></del>		- -		-	1.2 3	-	+				
Heptachlor		NA	140	1,300	4	<del>                                     </del>					-	+				
Inorganics, mg/kg					ļ			44.000		1,040	509	+	313	1,390	-	17,900
Aluminum	11,130	NA	78,000 n		+	6,930		14,800		1,040	308	-	- 010	1,000		
Arsenic	2.0	NA	0.43 /23 C		+	0.69		0.95 J			2.7	7 1	2.7 J	3.9	B	17.6 B
Barium	11.3	NA	5,500	140,000		7.2		16.7 J		4 J	2.	13	2.7 3	- 0.0	1	
Beryllium	0.18	NA	0.15 c		+	0.03	J	0.12	3		<del> </del>	╁		<del> </del>	$\vdash$	
Cadmium	ND	NA	39 n				_+		_+-	670 0	3,44	-	33.4 B	306		1,320 J
Calcium	321	NA	1,000,000	1,000,000		171	В	816	B  -	678 B		6 B	33.4	2.6		18.2
Chromium	11.3	NA	390 n			6		12.6	_+-	2.2 B		В	<del> </del>	0.81	<del></del> -	1.7 B
Cobalt	1.3	NA NA	4,700,000 r					0.97	В			+-		0.85	<del></del> -	
Соррег	2.8	NA	3,100 r							407	95.	_	25.9	1,220	1	1,180 J
Iron	829	NA	23,000 r			217	-	666		197		1 J	1.8 3		+	4.1
Lead	7.0	NA	400	40	<del>- [</del>	4.9		11.2		2 J		1 B		32.6	+	252 B
Magnesium	38.9	NA	460,468	460,46	-+	41.5		132		15.8 E		1 B	0.35			3 B
Manganese	0.69	NA	1,800 г			0.55	В	1.6	R	1.2 t		10	0.33 t	0.01		0.05
Mercury	0.12	NA	23		0 n				_+			+	<del>                                     </del>		++	5.9 B
Nickel	11.3	NA	1,600		_+		<del>                                     </del>	4.3	B				-	+	$\dagger \dagger$	176 B
Potassium	ND	NA	297,016	297,01	_	ļ			+			+-	1		$\dagger \dagger$	
Selenium	1.4	NA	390								_		+	-	┨┤	
Silver	1.1	NA	390		_		$\vdash$						+	-	+	27.6 B
Sodium	ND	NA	1,000,000	1,000,00			$\vdash$	12.4	R			+		1.8		
Thallium	ND	NA	6.3		0 n		_		-		,		0.67		В	35.8
Vanadium	5.9	NA	550		-	10.1	В	19.9		0.77		+	0.07	0.51		1.1 B
Zinc	0.66	NA	23,000	n 610,00	0 n		$\vdash$	0.95	R	0.91	3	-		3.3	+	
General chemistry, mg/kg					1		1-						<del> </del>		+	
Total Petroleum Hydrocarbons	s ND	NA	ND	N	D		_	55.1				_			لسل	

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Table B-2 Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

ldentifier	Background	SCTL	RBC for Residential Soil	RBC for Industrial Soil	17B01001	17B01101	17B01101D	17B01201	17B01301	17B01401	17B01501
Sampling Date	<u> </u>	L	1		4/26/95	4/26/95	4/26/95	5/26/95	5/26/95	5/26/95	5/26/95
Feet bis	***************************************				3.5	4.3	4.3	3	3	3	3
Volatile Organics, μg/kg		·									<del>-</del>
2-Butanone		NA	47,000,000 n	1,000,000,000 n							
Acetone		NA .	7,800,000 n	200,000,000 n	13		10 J	13	16	28	10 J
Toluene		NA NA	16,000,000 n	410,000,000 n							- 100
Xylene (total)		NA	16,000,000 n	1,000,000,000 n							
Semivolatile Organics, µg/kg		1									
2-Methylnaphthalene		NA	3,100,000 n	82,000,000 n					140 J		
Acenaphthene '		NA	4,700,000 n	120,000,000 n					1,300		
Anthracene		NA	23,000,000 n	610,000,000 n				·	2,100		
Benzo(a)anthracene		NA	880 c	7,800 c					5300 D	110 J	
Benzo(a)pyrene		NA	88 c	780 c					4500 D		
Benzo(b)fluoranthene	P	NA	880 c	7,800 c					<b>3844900</b> D		
Benzo(g,h,i)perylene		NA	2,300,000	61,000,000					3,300 D		
Benzo(k)fluoranthene		NA	8,800 c	78,000 c					2,500		
Butylbenzylphthalate		NA	16,000,000 n	410,000,000 n							
Carbazole		NA	32,000 c	290,000 c					1,700		
Chrysene		NA	88,000 c	780,000 c					5,300 D		
Dibenz(a,h)anthracene		NA	88 c	780 c					E 1200		
Dibenzofuran		NA	310,000 n	82,000,000 n					700		
Fluoranthene		NA	3,100,000 n	82,000,000 n					12,000 D	190 J	
Fluorene		NA	3,100,000 n	82,000,000 n					1,400		
Indeno(1,2,3-cd)pyrene		NA	880 c	7,800 c					ME 3100		
Naphthalene		NA	3,100,000 n	82,000,000 n					170 J		
Phenanthrene		NA	2,300,000 n	61,000,000 n		7			10,000 D	120 J	
Pyrene		NA	2,300,000 n	61,000,000 n					9,700 D		
Pesticides, µg/kg											
4,4'-DDD		NA	2,700 c	24,000 c		3.4 J	55 D				
4,4'-DDE		NA	1,900 c	17,000 c		1.5 J	16				3.6 J
4,4'-DDT		NA	1,900 c	17,000 c		2.9 J	28				7.2
alpha-Chlordane	1	NA	490 c	4,400 c			0.86 J			33	0.87 J
Dieldrin		NA	40	360						35	2.2 J

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Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

			RBC for	RBC for Industri	- 1												١.		
Identifier	Backgroui	nd SCTL	Residential Soil	Soil		17B0100	1	17B0110	1	17B011010	) [	17B01201	1	17B01301	17B0			7B0150	
Sampling Date						4/26/95		4/26/95	_	4/26/95	1	5/26/95	_	5/26/95	5/26		-	5/26/95	4
Feet bis						3.5	_	4.3	_	4.3	_	3	_	3	3	1	-	3	_
Endrin ketone		NA	23,000	610,000					_		1		$\perp$			_	4		$\perp$
gamma-Chlordane		NA	490 c	4,400	С		_			1.4 J	$\perp$		4		ļ	69	-	1.4	J
Heptachlor		NA	140	1,300			4				1		4		ļ	_			
Inorganics, mg/kg							_		_		4		4		ļ		_		
Aluminum	11,130	NA	78,000 n	1,000,000 r		613		99.6	_	7,870	268	3,080	_	796		49		367	<del> </del>
Arsenic	2.0	NA	0.43 /23 c/i		c/n		_		_			2.1		1.4 J		1.4 E		0.98	
Barium	11.3	NA	5,500	140,000		1.7	В	0.34	В	9.8	1	3.8	В	2.1 B	<b>}</b>	1.2 E	3	1.1	В
Beryllium ·	0.18	NA	0.15 c	1.3					_		1				ļ	-			-
Cadmium	ND	NA	39 n	1,000 г	n				_		_				<u> </u>				_
Calcium	321	NA NA	1,000,000	1,000,000		232		213	J	7,190 J	4	2,650	-	2,220		'05 E		1,010	
Chromium	11.3	NA NA	390 n	10,000		1,1	В		_	6.3	- -	2.7		0.89 B	ļ	1.5 E	3	0.93	В
Cobalt	1.3	NA NA	4,700,000 n	120,000,000						0.91 E	3						+		_
Copper	2.8	NA	3,100 n	82,000	n							1.7	В			1.6 E	3	0.33	
Iron	829	NA	23,000 n	610,000	n	84.1	J	299		447 J	4	190		204		260	_	188	
Lead	7.0	NA NA	400	400		0.88		0.47		3.1	1	1.5		0.98 J		.99	_	0.43	+
Magnesium	38.9	NA	460,468	460,468		19.5	}!	5.7		133 E		45.7		38.4 B		8.7		23.3	<del> </del>
Manganese	0.69	NA NA	1,800 n	47,000		0.38	В	0.28	В	1.8	3	0.61	В	1.5 B	0	.89 (	B	0.61	B
Mercury	0.12	NA	23 n	610					_		4				<del> </del>	$\dashv$			⊬
Nickel	11.3	NA	1,600 n	41,000	n				_		4				<b>├</b> ──	$\dashv$			<del> </del>
Potassium	ND	NA	297,016	297,016						-	4			<u> </u>	<del> </del>		- -		┞
Selenium	1.4	NA	390 n	10,000							4				-	-	- -		₽
Silver	1.1	NA	390 п	10,000							4				-		_		<u> </u>
Sodium	ND	NA	1,000,000	1,000,000					_	l	_			5.7 B	<del> </del>	4.9	B	6.1	R
Thallium	ND	NA	6.3 n	160		0.51	-	0.52	В	0.75						_	_		1
Vanadium	5.9	NA	550 n	14,000	n	0.69	-			9.9	-+-	2.9	-	1.3 B	<del> </del>	1.6		1.1	+-
Zinc	0.66	NA	23,000 n	610,000	n	0.41	В	0.46	В	0.82	3	0.48	В	0.77 B	<del>                                     </del>	.79	R	0.68	B
General chemistry, mg/kg							L				4				1	_			╄
Total Petroleum Hydrocarbons	ND	NA	ND	ND				<u> </u>	L					34.6	11	8.3	丄	15.2	L

age A17.

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Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

Identifier Sampling Date	Backgrou	und SCTL	RBC for Residential Soil	RBC for Industrial Soil	17B01601	17B01701	17B01802	17B01902	17B02001	17B02101	17B02101D
				<u> </u>	5/26/95	5/26/95	4/25/95	4/26/95	4/25/95	4/25/95	4/25/95
Feet bis				·	3	3	5.5	4.5	4.5	4	4
Volatile Organics, µg/kg	7.5										
2-Butanone		NA	47,000,000 n	1,000,000,000 n							
Acetone		NA	7,800,000 n	200,000,000 n	15	9 J		8 J	7 J	11 J	14
Toluene		NA	16,000,000 n	410,000,000 n							
Xylene (total)		NA	16,000,000 n	1,000,000,000 n							
Semivolatile Organics, µg/kg											
2-Methylnaphthalene		NA	3,100,000 n	82,000,000 n							
Acenaphthene		NA	4,700,000 n	120,000,000 n	410						
Anthracene		NA .	23,000,000 n	610,000,000 n	540						
Benzo(a)anthracene	*	NA	880 c	7,800 c	2600						
Benzo(a)pyrene		NA	88 c	780 c	420						
Benzo(b)fluoranthene		NA	880 c	7,800 c	2000						
Benzo(g,h,i)perylene		NA	2,300,000	61,000,000							
Benzo(k)fluoranthene		NA	8,800 c	78,000 c	1,500						
Butylbenzylphthalate		NA	16,000,000 n	410,000,000 n							
Carbazole		NA	32,000 c	290,000 с	250 J	*****					
Chrysene		NA	88,000 c	780,000 c	2,000						
Dibenz(a,h)anthracene		NA	88 c	780 c	490						
Dibenzofuran		NA	310,000 n	82,000,000 n	220 J						
Fluoranthene		NA	3,100,000 n	82,000,000 n	4,400 D						
Fluorene		NA	3,100,000 n	82,000,000 n	500						
Indeno(1,2,3-cd)pyrene		NA	880 c	7,800 c	360 J						
Naphthalene		NA	3,100,000 n	82,000,000 n							
Phenanthrene		NA	2,300,000 n	61,000,000 n	2,600						
Pyrene		NA	2,300,000 n	61,000,000 n	1,200						
Pesticides, µg/kg										<del> - </del>	
4,4'-DDD		NA	2,700 c	24,000 c	160						
4,4'-DDE		NA	1,900 c	17,000 c	55 N	1.9 J					
4,4'-DDT		NA	1,900 c	17,000 c	200 J	20					
alpha-Chlordane		NA	490 c	4,400 c	45	2.7					
Dieldrin		NA	40	360	28 J						

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Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

Identifier	Background	SCTL	RBC for Residential Soi	RBC for Industrial	17B0160	1	17B01701	1	17B01802	17B01902	17B02001	17B021		17B0210	
Sampling Date					5/26/95		5/26/95	1	4/25/95	4/26/95	4/25/95	4/25/9	5	4/25/95	<u>:</u>
Feet bis					3		3	$\perp$	5.5	4.5	4.5	4	,_	4	<del>, -</del>
Indrin ketone		NA	23,000	610,000				_					$\sqcup$		-
amma-Chlordane		NA	490 c	4,400 c	50	N	2.8	1				<u> </u>	1		╄-
leptachlor		NA	140	1,300		_	<u></u>	1				<u> </u>	1		╄
norganics, mg/kg						_		_					_		1.
Aluminum	11,130	NA	78,000 n	1,000,000 n	2,160	_	1,870		2,140 J	6,840	10,500 J	4,620		3,000	-
Arsenic	2.0	NA	0.43 /23 C	n 3.8 /610 c/r		-	1.7		0.69 B		1.3 B			0.76	+
Barium	11.3	NA	5,500	140,000	9.5	В	3.6		4.1 B	9 B	10.6 J			4.1	В
Beryllium	0.18	NA	0.15 c	1.3 c	0.09	В	0.06	В			0.03 B	0.03	В		$\downarrow$
Cadmium	ND	NA	39 n	1,000 ก				_				<u> </u>	1		1
Calcium	321	NA	1,000,000	1,000,000	77,900		6,880		92.3 B	. 171 J	211 J	237	-	637	
Chromium	11.3	NA	390 n	10,000 n	6		2.5	$\bot$	2.2 B	5.4	6.7 J	4.1		2.5	J
Cobalt	1.3	NA	4,700,000 n	120,000,000 n	0.71	В			0.73 B	0.78 B	0.82	0.7	B		1
Copper	2.8	NA	3,100 n	82,000 n	2.6	В	0.88	В	4.3 B	0.96 B			_	ļ	1
Iron	829	NA	23,000 n	610,000 n	691		1,150		69.4 J	260 J	473 J			208	+-
Lead	7.0	NA	400	400	9.7		1.4	J	2	3	5.7	1.7		1.8	
Magnesium	38.9	NA NA	460,468	460,468	636	В	92.6	В	15.3 B	55.3 B	87.9 J			45.1	-+-
Manganese	0.69	NA	1,800 n	47,000 n	11.2		1.5	В	0.36 B	0.99 B	1.1 J		2 J	0.78	+-
Mercury	0.12	NA	23 n	610 n	0.03	В		_			0.03 E		4 B	0.04	ŀΕ
Nickel	11.3	NA	1,600 n	41,000 n				_			5.1 E	<u> </u>			1
Potassium	ND	NA	297,016	297,016		L				119 B	<b> </b>	<u> </u>	╁_		1
Selenium	1.4	NA	390 n	10,000 n			0.7	В				<u> </u>		<u> </u>	1
Silver	1.1	NA	390 n	10,000 n							<u> </u>		4-		4
Sodium	ND	NA	1,000,000	1,000,000			5.7	В			10.4 E	3			4
Thallium	ND	NA	6.3 n	160 n							<b> </b>		1_		1
Vanadium	5.9	NA	550 n	14,000 n	9.6	В	5.5		1.7 B	5.5 B	8.1 E		5 B	2.6	-
Zinc	0.66	NA	23,000 n	610,000 n	43.9		0.77	В	0.4 J	1 B	0.51	0.6	1 J	0.92	<u> </u>
General chemistry, mg/kg					*						<u> </u>			<u> </u>	1
Total Petroleum Hydrocarbons	ND	NA NA	ND	ND	34.3	_	10		19.2		9.7	24.	5	8.3	<u> </u>

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## Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

ldentifier	Background	SCTL	RBC for Residential Soil	RBC for Industrial Soil	17B02201	17B02302	17B02402	17B02502	17B04801	17B05101
Sampling Date					4/25/95	5/26/95	5/26/95	5/26/95	11/25/97	11/25/97
Feet bls					5.5	3	3	3	2-3	2-3
Volatile Organics, μg/kg		:								
2-Butanone	:	NA	47,000,000 n	1,000,000,000 n			5 J		NA	NA
Acetone		NA	7,800,000 n	200,000,000 n		17	53		NA	NA
Toluene		NA	16,000,000 n	410,000,000 n				2 J	NA	NA
Xylene (total)		NA	16,000,000 n	1,000,000,000 n					NA	NA
Semivolatile Organics, µg/kg			47.46 4.774							
2-Methylnaphthalene		NA	3,100,000 n	82,000,000 n						
Acenaphthene		NA	4,700,000 n	120,000,000 n						
Anthracene		NA	23,000,000 n	610,000,000 n						
Benzo(a)anthracene		NA	880 c	7,800 c				170 J		7.4 PF
Benzo(a)pyrene		NA	88 c	780 c				170 J		12
Benzo(b)fluoranthene		NA	880 c	7,800 c				220 J		12
Benzo(g,h,i)perylene		NA	2,300,000	61,000,000				130 J		7.8
Benzo(k)fluoranthene		NA	8,800 c	78,000 c				130 J		6.2
Butylbenzylphthalate		NA	16,000,000 n	410,000,000 n					NA	NA
Carbazole		NA	32,000 c	290,000 c						
Chrysene		NA	88,000 c	780,000 c				190 J		13
Dibenz(a,h)anthracene		NA	88 c	780 c						5.7
Dibenzofuran		NA	310,000 n	82,000,000 n						
Fluoranthene		NA	3,100,000 n	82,000,000 n				310 J		
Fluorene		NA .	3,100,000 n	82,000,000 n						
Indeno(1,2,3-cd)pyrene		NA	880 c	7,800 c				110 J		7.8
Naphthalene		NA	3,100,000 n	82,000,000 n						
Phenanthrene		NA	2,300,000 n	61,000,000 n						
Pyrene		NA	2,300,000 n	61,000,000 n				250 J	21	30
Pesticides, µg/kg										
4,4'-DDD		NA	2,700 c	24,000 c		1 1			NA	NA
4,4'-DDE	j	NA	1,900 c	17,000 c				10 J	NA	NA
4,4'-DDT	1 1	NA	1,900 c	17,000 c			· · · · · · · · · · · · · · · · · · ·	21 J	NA	NA
alpha-Chlordane		NA	490 c	4,400 c		6.8		12 P	, NA	NA
Dieldrin		NA	40	360				12 J	NA	NA NA

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Table B-2. Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

			RBC for	R	RBC for Indust	rial											
Identifier	Background	SCTL	Residential Soi	ii 📗	Soil		17B0220	11	17B02302	1	17B0240	2	17B025	02	17B04801	<u> </u>	17B05101
Sampling Date							4/25/95		5/26/95		5/26/95		5/26/9	5	11/25/97		11/25/97
Feet bis		į.					5.5		3		3		3		2-3		2-3
Endrin ketone		NA	23,000		610,000										NA		NA
gamma-Chlordane		NA	490 c		4,400	С			7			ot	14	L_	NA		NA
Heptachlor		NA	140		1,300										NA		NA
Inorganics, mg/kg					4 1.34					$\perp$							
Aluminum	11,130	NA	78,000 n		1,000,000	n	1,310	J	2,680	Ţ	5,270		1,640		NA		NA
Arsenic	2.0	NA	0.43 /23 C	/n	3.8 /610	c/n			1.4 B		1	В	0.57	В	NA NA		NA
Barium	11.3	NA	5,500		140,000		3.6	В	6.6 B		12		8	В	NA		NA
Beryllium	0.18	NA	0.15 c		1.3	C.	0.03	В	0.06 B		0.06	В			NA		NA
Cadmium	ND	NA	39 n		1,000	n									NA		NA
Calcium	321	NA	1,000,000		1,000,000		69.9	В	3,380		376	В	15,100	_	NA NA		NA
Chromium	11 3	NA	390 n	.	10,000	n	1.5	В	2.7		4.7		2.1	В	NA		NA
Cobalt	13	NA	4,700,000 n		120,000,000	n					0.77			L	NA NA		NA
Copper	2.8	NA	3,100 n		82,000	n			1.6 E	3	0.41	В			NA		NA
Iron	829	NA	23,000 n	r	610,000	n	46.2	J	314	L	817		710		NA		NA
Lead ,	7.0	NA	400		400		1.6		11.7 J		6.4		7.4	J	NA NA		NA
Magnesium	38.9	NA	460,468		460,468		12.6		81.4 E	3	23	В	210	В	NA		NA
Manganese	0.69	NA	1,800 n	1	47,000	n	0.44		2.4 E	3	4		5		NA		NA
Mercury	0.12	NA	23 n	1	610	n	0.04	В		_ _	0.03	В		_	NA		NA
Nickel	11.3	NA	1,600 n	1	41,000	n		L						<u></u>	NA		NA
Potassium	ND	NA	297,016		297,016										NA		NA
Selenium	1.4	NA	390 n	)	10,000	n	<u> </u>	L							NA		NA NA
Silver	1.1	NA	390 n	1	10,000	n				_ _					NA		NA NA
Sodium	ND	NA	1,000,000		1,000,000				7.5 E	3	5.9	В		1_	NA		NA
Thallium	ND	NA	6.3 n	1	160	n									NA		NA
Vanadium	5.9	NA	550 n		14,000	n			2.7 E	3	4.5	_	3.1		NA		NA
Zinc	0.66	NA	23,000 n	1	610,000	n			2.6 E	3	0.71	В	5.2	1_	NA		NA NA
General chemistry, mg/kg										]				_			
Total Petroleum Hydrocarbons	ND	NA	ND		ND		36.5		26.6				39.6		NA		NA

#### Appendix B

#### Table B-2 Notes to Summary of Positive Detections in Subsurface Soil Analytical Results, Study Area 17

Naval Training Center, Orlando Orlando, FL

#### NOTES:

The background screening value is twice the average of detected concentrations for inorganic analytes.

SCTL = Florida Department of Environmental Protection, Soil Cleanup Target Levels, Chapter 62-785 FAC, April 30, 1998.

SCTL values are not applicable because there is no exceedance of groundwater cleanup target levels.

RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.L. Smith. RBC for chromium is based on chromium VI. RBC for lead is not available, value is Interim Guidance on Establishing Soil Lead Cleanup Levels at Superfund Sites (OSWER directive 9355-4-12). For essential nutrients (calcium, magnesium, sodium) screening values were derived based on recommended daily allowances.

RBC for benzo(g,h,i)perylene and phenanthrene are not available, value is based on pyrene.

ug/kg = micrograms per kilogram

DDE = dichlorodiphenyldichloroethene.

mg/kg = milligrams per kilogram

DDT = dichlorodiphenyltrichloroethane

n = noncarcinogenic effects

DDD = dichlorodiphenyldichloroethane.

c = carcinogenic effects

ND = Not determined

NA = Not applicable

bls = below land surface

- B = Reported concentration is between the instrument detection limit (IDL) and Contract Required Detection Limit (CRDL).
- J = Reported concentration is an estimated quantity.
- D = Reported concentrations if from a dilution/reanalysis.
- PF = This laboratory qualifier indicates that the reported result is uncertain since the percent difference between the original and confirmation analysis is greater than 50%
- FDEP = Florida Department of Environmental Protection.
- OSWER = Office of Solid Waste and Emergency Response.
- USEPA = U.S. Environmental Protection Agency.

All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight; organics in micrograms per kilogram (µg/kg) soil dry weight.

Bold/shaded values indicate exceedance of regulatory guidance and background

Blank space indicates analyte/compound was not detected at the reporting limit.

#### TABLE B-3

SUMMARY OF POSITIVE DETECTIONS IN GROUNDWATER ANALYTICAL RESULTS

Well ID							OLD-17-01	OLD-17-	02	OLD-17-03			OLD-17	-04		
ldentifier	Background	FDEPG	CTL	FEDMCL	RBC for T Water	ар	17G00101	17G0020	)1	17G00301	17G004	01	17G004		17G004	403
Sampling Date							5/31/95	5/31/95	;	5/31/95	5/31/9	5	6/17/9		2/12/9	
Volatile Organics, μg/L														Π		T
1.1-Dichloroethane		70	mc/st	ND	810	n						$\top$			<del> </del>	+
1,1-Dichloroethene		7	p/c	7	0.044	С					3	J	21	J		
Carbon disulfide		700	mc/st	ND	1000 n							$\vdash$		$\vdash$	Marie de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya del companya de la companya del companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de l	
Chloroform		5.7	mc/c	100	0.15	С		5				$\vdash$		<del>                                     </del>	<del> </del>	+-
Chloromethane		2.7	mc/c	ND	1.4	С						1			<del> </del>	+-
cis-1,2-Dichloroethene		70	p/st	70	61	n					200			$\vdash$		D
m-Dichlorobenzene		10	mc/o	ND	540	n		T							Sala Trans all Marke	-
n-Butylbenzene		ND		ND	61	n								1	<del>                                     </del>	+
n-Propylbenzene		ND		ND	61	n					1		†	<del>                                     </del>	<del> </del>	+
Tetrachloroethene		3	p/c	5	1.1	С	0.4 J					_				+
Toluene		40	s/st	1000	750	n								-	1	+
trans-1,2-Dichloroethene		100	p/st	100	120	n					5	J	10	J	6.9	<u>,                                     </u>
Trichloroethene		3	p/c	5	1.6	С					(FFEE 4)2		STATE OF		SE 121	
Vinyl chloride		1	p/c	2	0.019	С					Ja. 25 190		28921870			D D
Semivolatile Organics, µg/L													AP 17 PERSON NEWS CONTROL CONTROL			
bis(2-Ethylhexyl)phthalate		6	p/c	6	4.8 c			1			1		1	-	NA	+-

Naval Training Center, Orlando Orlando, FL

Well ID		T					OLD-17-0	)1	OLD-17-0	)2	OLD-17-0	3			OLD-17-	04		
Identifier	Background	FDEPG	CTL	FEDMCL	RBC for Ta	ap	17G0010	)1	17G0020	1	17G0030	1	17G0040	)1	17G0040		17G0040	3_
Sampling Date	T	-					5/31/95		5/31/95		5/31/95		5/31/95		6/17/96	3	2/12/97	
Junip.n.g							_				.	Ì					**	
Inorganics, µg/L		-			07.000		910	_	4800		6650		1,050		155	вј	NA	_
Aluminum	4,067	200		ND	37,000		2.7	1	4000								NA	
Antimony	4.1		p/st	6	15	<del> </del>	2.1	J			<del> </del>		2.1	1	1.7	8.1	NA	
Arsenic	5		p/c	50	0.045 /11				40.0	_	53.2	-	41.2		51	·	NA	
Barium	31.4	2,000	p/st	2,000	2,600	<u>,                                    </u>	66.9		40.9		<del> </del>		41.2	<u>-</u>	31	-	NA.	
Beryllium		4	p/c	4	0.016		0.12		0.15	J	0.17	<u> </u>			26000	-	NA NA	
Calcium	36,830	ND		ND	1,000,000		136,000		67,600		17,800		36,400		26000		NA NA	
Chromium	7.8	100	р	100	180	n					6.1	В				-		
Copper	5.4	1,000	s/st	ND	1500	n						_					NA	
Iron	1,227	300	s	ND	11000	n	108	<u> </u>	1310		14800		£25 6760	_	#6.40400		NA	
Lead	4	15	p/st	15	15	Ì _			2.4	В	3.4						NA	
Magnesium	4,560	ND		ND	118,807		14,700		7,240		5,470		10,400		10500		NA	
Manganese	17	50	s/st	ND	180	n	10.5	В	21		28.3		38.5		33.9	<u> </u>	NA	
Nickel		100	p/st	100	730	n											NA NA	
Potassium	5,400	ND	<b></b>	ND	297,016				1,460	J	747	j	1,690	J	1560	-	NA	
Silver	5,.65		s/st	ND	180	n									3.1	BJ	NA NA	
	9.7		p/st	50	180	n					2.3	J			F	]	NA	
Selenium	18,222	160,000	·	ND	396,022	+	16,100		7,960		3,670	В	9,690		8520	J	NA	
Sodium	<del> </del>	_ <del></del>	·	110	2.9		10,100	<del>                                     </del>	4.8	_	1						NA	i -
Thallium	3.8		p	ND ND	260	-	81.5	1	19.7		12.6	В	5.9	В	3.6	В	NA	
Vanadium	20.6		mc/st	<u> </u>			2.1	-	3.9		2.5		3.8	+		1	NA	_
Zinc	4	5,000	s/st,	ND ND	11000	1111	2.1	10	3.5	10	2.0	<del>-</del>		1	<del></del>	1		
General chemistry, mg/L	<u> </u>		<u> </u>			+	5	-	3	-	90	-	3	1	<del>                                     </del>	1	NA	
Total Suspended Solids	ND	NE	<u>'</u>	ND	NE	1		<u> </u>	1 3		1 30	L		ــــــــــــــــــــــــــــــــــــــ				

Page :

Well ID								OLD	-17-05				OLD-17-T24	OLD-17	<b>'-06</b>
14400-					RBC for T	ар									
Identifier	Background	FDEPG	CIL	FEDMCL	Water	,	17G00404	17G00501	17G0050	1D	17G005	02	17G024T1	17G006	301
Sampling Date	1 1				ļ	ļ	19-Jun-98	5/31/95	5/31/95	5	8-Jun-9	8	6/2/95	2/12/9	7
Volatile Organics, μg/L															
1,1-Dichloroethane		70	mc/st	ND	810	n								<del> </del>	1
1,1-Dichloroethene		7	p/c	7	0.044	С	26							<del> </del>	+
Carbon disulfide		700	mc/st	ND	1000 n			1						<del> </del>	+-
Chloroform		5.7	mc/c	100	0.15	С					0.69	J			+
Chloromethane		2.7	mc/c	ND	1.4	С					1.2	_			╁
cis-1,2-Dichloroethene		70	p/st	70	61	n	420							11	+
m-Dichlorobenzene		10	mc/o	ND	540	n					0.67	J		· · · · · · · · · · · · · · · · · · ·	+-
n-Butylbenzene		ND		ND	61	n						-			+-
n-Propylbenzene		ND	İ	ND	61	n									╫┈
Tetrachloroethene		3	p/c	5	1.1	С								<del> </del>	-
Toluene		40	s/st	1000	750	n								<del>                                     </del>	┼-
rans-1,2-Dichloroethene		100	p/st	100	120	n	4.1 J		<u> </u>						+-
Frichloroethene		3	p/c	5	1.6	С	260								-
/inyl chloride		1	p/c	2	0.019	С	350							46° 34'K15	1
Semivolatile Organics, µg/L														And the second second second second	
ois(2-Ethylhexyl)phthalate		6	p/c	6	4.8 c		NA		1		NA			NA	-

Appendix B
Table B-3.1. Summary of Positive Detections in Groundwater Analytical Results
Study Area 17

Well ID				<del></del>				0	LD-	17-05			OLD-17-T	24	OLD-17-06
Identifier	Background	FDEPG	CTL	FEDMCL	RBC for Ta Water	ıp	17G00404	17G0050	)1	17G0050	1D	17G00502	17G0241	1	17G00601
Sampling Date							19-Jun-98	5/31/95		5/31/95	<u> </u>	8-Jun-98	6/2/95		2/12/97
Inorganics, µg/L															
Aluminum	4,067	200	S	ND	37,000	n	NA	473		1,340		NA	551		NA
Antimony	4.1		p/st	6	15		NA					NA			NA
Arsenic	5		p/c	50	0.045 /11		NA	2.7	J	2.4	J	NA			NA
Barium	31.4	2,000	·	2,000	2,600		NA	33.2		34.4	J	NA	115	J	NA
Beryllium			p/c	4	0.016		NA					NA			NA
Calcium	36,830	ND		ND	1,000,000		NA	34,700		34,000		NA	44,700		NA
Chromium	7.8	100	0	100	180		NA					NA	5.2	В	NA
Copper	5.4	1,000	·	ND	1500		NA	23.8	В			NA			NA
Iron	1,227	300	<del></del>	ND	11000	n	NA	7650		6460		NA	<b>36 100000</b>		NA
Lead	1,22,	<del></del>	p/st	15	15	<del> </del>	NA					NA			NA
Magnesium	4,560	ND	<del></del>	ND	118,807		NA	6,130		5,670		NA	3,730	В	NA
Manganese	17		s/st	ND	180	n	NA	20.2		18.9		NA	\$2 \$ \$265		NA
Nickel			p/st	100	730		NA			<del> </del>		NA	25.6	В	NA
Potassium	5,400	ND		ND	297,016		NA	2,090	J	2,140	J	NA	3,330	J	NA
Silver	0,400		s/st	ND	180	-	NA					NA			NA
Selenium	9.7	<del></del>	p/st	50	180	n	NA					NA			NA
Sodium	18,222	160,000		ND	396,022		NA	7,090	$\Box$	6,790		NA	4,660	В	NA
Thallium	3.8		p	2	2.9		NA					NA			NA
Vanadium	20.6		mc/st	ND	260		NA	6.4	В	7.6	В	NA	4.4	В	NA
Zinc	4	5,000	· <del> </del>	ND	11000	<del> </del>	NA	5.1		2.5	В	NA	226	-	NA
General chemistry, mg/L	<del> </del>	- 3,000	3,51			<del> </del>									
Total Suspended Solids	ND	ND		ND	ND	1	NA			3	Γ	NA	76		NA

Well ID							OLD-17-	07	OLD-17-	80	OLD-17-	09			OLD-17-	10		
ldentifler	Background	FDEPO	SCTL	FEDMCL	RBC for Ta	ар	17G0070	)1	17G008	01	17G009	01	17G010	01	17G0100	1D	17G010	 ევ
Sampling Date							2/12/97	,	2/12/9	7	2/12/97	7	2/12/9	7	2/12/97	7	19-Jun-9	}8
Volatile Organics, μg/L																		
1,1-Dichloroethane		70	mc/st	ND	810	n	1.00	100		gir d Fri ili								
1,1-Dichloroethene		7	p/c	7	0.044	С												
Carbon disulfide		700	mc/st	ND	1000 n													
Chloroform		5.7	mc/c	100	0.15	С												Ī
Chloromethane		2.7	mc/c	ND	1.4	С												ı
cis-1,2-Dichloroethene		70	p/st	70	61	n	7.2		40		3.6		3.4		3.2		30	
m-Dichlorobenzene		10	mc/o	ND	540	n												
n-Butylbenzene		ND		ND	61	n												
n-Propylbenzene		ND		ND	61	n												
Tetrachloroethene		3	p/c	5	1.1	С												i
Toluene		40	s/st	1000	750	n												
trans-1,2-Dichloroethene		100	p/st	100	120	n												
Trichloroethene		3	p/c	5	1.6	c							2.3		2.2		6.6	
Vinyl chloride		1	p/c	2	0.019	С	67		2.9		2.6		4 14		CESTON 6		######################################	
Semivolatile Organićs, µg/l	_																	
bis(2-Ethylhexyl)phthalate		6	p/c	6	4.8 c		NA		NA		NA		NA		NA		NA	

Well ID							OLD-17-07	OLD-17-08	OLD-17-09		OLD-17-10	
ldentifier	Background	FDEPG	CTL	FEDMCL	RBC for Ta Water	ap	17G00701	17G00801	17G00901	17G01001	17G01001D	17G01003
Sampling Date							2/12/97	2/12/97	2/12/97	2/12/97	2/12/97	19-Jun-98
Inorganics, µg/L												
Aluminum	4,067	200	5	ND	37,000	n	NA	NA	NA	NA	NA	NA
Antimony	4.1	6	p/st	6	15	n	NA	NA	NA	NA	NA	NA
Arsenic	5	50	p/c	50	0.045 /11	c/n	NA	NA	NA	NA	NA	NA
Barium	31.4	2,000	p/st	2,000	2,600	n	NA	NA	NA	NA	NA	NA
Beryllium		4	p/c	4	0.016	С	NA	NA	NA	NA	NA	NA
Calcium	36.830	ND		ND	1,000,000		NA	NA	NA	. NA	NA	NA NA
Chromium	7.8	100	р	100	180	n	NA	NA	NA	NA	NA	NA
Copper	5.4	1,000	s/st	ND	1500	n	NA	NA	NA	NA	NA	NA
Iron	1,227	300	S	ND	11000	n	NA	NA	NA	NA	NA	NA
Lead	4	15	p/st	15	15		NA	NA	NA	NA	NA	NA
Magnesium	4,560	ND		ND	118,807		NA	NA	NA	NA	NA	NA NA
Manganese	17	50	s/st	ND	180	n	NA	NA	NA	NA	NA	NA
Nickel		100	p/st	100	730	n	NA	NA	NA	NA	. NA	NA
Potassium	5,400	ND		ND	297,016		NA	NA	NA	NA	NA	NA NA
Silver		100	s/st	ND	180	n	NA	NA	NA	NA NA	NA	NA
Selenium	9.7	50	p/st	50	180	n	NA	NA	NA	NA NA	NA	NA
Sodium	18,222	160,000	р	ND	396,022		NA	NA	NA	NA	NA	NA
Thallium	3.8	2	р	2	2.9	n	NA	NA	NA	NA	NA NA	NA
Vanadium	20.6	49	mc/st	ND	260	n	NA	NA	NA	NA	NA NA	NA NA
Zinc	4	5,000	s/st	ND	11000	n	NA	NA	NA	NA	NA	NA
General chemistry, mg/L												
Total Suspended Solids	ND	ND		ND	ND	ļ	NA	NA NA	NA	NA	NA	NA NA

Well ID							OLD-17-2	20	OLD-17	-22		OLD-	-17-23			OLD	-17-24	
ldentifier	Background	FDEP	3CTL	FEDMCL	RBC for Ta Water	ар	17G0200	1	17G022	01	17G023	•	17G0230	11D	17G024		17G0240	040
Sampling Date							11-Jun-9	8	16-Jun-	98	18-Jun-		18-Jun-		18-Jun-		18-Jun-	
Volatile Organics, μg/L															1000	Ť	, to can	Ť
1,1-Dichloroethane		70	mc/st	ND	810	n	3.4	j		$\vdash$	<u> </u>	_	30	<del> </del>	1	+-	1	+
1,1-Dichloroethene		7	p/c	7	0.044	С	1,	-		$\vdash$		-		-		<del> </del>		+
Carbon disulfide		700	mc/st	ND	1000 n					<del> </del> -		-			<del> </del>	-		+-
Chloroform		5.7	mc/c	100	0.15	С			0.89	J						$\vdash$		+
Chloromethane		2.7	mc/c	ND	1.4	С			1.6	<del></del>						<del> </del>	<u> </u>	+-
cis-1,2-Dichloroethene		70	p/st	70	61	n	98		1.7	-	8.8		9.9		· · · · · · · · · · · · · · · · · · ·	-		+-
m-Dichlorobenzene		10	mc/o	ND	540	_				Ť	0.0		0.0	-				+
n-Butylbenzene		ND		ND	61	n				<del>                                     </del>				H				+-
n-Propylbenzene		: ND		ND	61	n										-	<del></del>	+
Tetrachloroethene		3	p/c	5	1.1	С		1			<u> </u>					<del> </del>		+-
Toluene ,		40	s/st	1000	750	n				<u> </u>	<del> </del>							+
trans-1,2-Dichloroethene		100	p/st	100	120	n	0.76 J	,										+-
Trichloroethene		3	p/c	5	1.6	С							. 25		e 65000		-872000	_
Vinyl chloride		1	p/c	2	0.019	С	140						500 S S S S S S S S S S S S S S S S S S				Section 1	$\vdash$
Semivolatile Organics, µg/L																		
bis(2-Ethylhexyl)phthalate		6	p/c	6	4.8 c		NA		NA		NA		NA		NA		NA	├-

Well ID					T		OLD-17-20	OLD-17-22	OLD	-17-23	OLD-	-17-24
ldentifier	Background	I FDEPG	CTL	FEDMCL	RBC for Ta	ар	17G02001	17G02201	17G02301	17G02301D	17G02401	17G02401D
Sampling Date							11-Jun-98	16-Jun-98	18-Jun-98	18-Jun-98	18-Jun-98	18-Jun-98
Inorganics, µg/L				·				:				
Aluminum	4,067	200	s	ND	37,000	n	NA	NA	NA	NA	NA	NA
Antimony	4.1	6	p/st	6	15	n	NA	NA	NA	NA NA	NA	NA
Arsenic	5	50	p/c	50	0.045 /11	c/n	NA _	NA NA	NA	NA	NA	NA NA
Barium	31.4	2,000	p/st	2,000	2,600	n	NA _	NA NA	NA NA	NA NA	NA	NA NA
Beryllium		4	p/c.	4	0.016	С	NA	NA	NA	NA	NA	NA
Calcium	36,830	ND		ND	1,000,000		NA	NA	NA	NA	NA	NA NA
Chromium	7.8	100	р	100	180	n	NA	NA	NA	NA NA	NA	NA
Copper	5.4	1,000	s/st	ND	1500	n	NA	NA	NA	NA	NA	NA NA
Iron	1,227	300	s	ND	11000	n	NA	NA	NA	NA	NA NA	NA NA
Lead	4	15	p/st	15	15		NA	NA	NA	NA	NA	NA
Magnesium	4,560	ND		ND	118,807		NA	NA	NA	NA	NA	NA .
Manganese	17	50	s/st	ND	180	n	NA	NA	NA	NA	NA	NA
Nickel		100	p/st	100	730	n	NA	NA	NA	NA	NA	NA
Potassium	5,400	ND		ND	297,016		NA	NA	NA	NA	NA	NA
Silver		100	s/st	ND	180	n	NA	NA	NA	NA	NA	NA NA
Selenium	9.7	50	p/st	50	180	n	NA	NA	NA	NA	NA NA	NA
Sodium	18,222	160,000	p	ND	396,022	!	NA	NA	NA	NA	NA	NA
Thallium	3.8	2	р	2	2.9	n	NA	NA	NA	NA	NA	NA
Vanadium	20.6	49	mc/st	ND	260	n	NA	NA	NA	NA	NA	NA
Zinc	4	5,000	s/st	ND	11000	n	NA	NA	NA	NA	NA	NA
General chemistry, mg/L												
Total Suspended Solids	ND	ND		ND	NE		NA	NA	NA	NA	NA	NA

Well ID	·						OLD-17-2	25	OLD-17-26	OLD-	7-27	OLD-17	-28	OLD-17-	-29	OLD-17	-30
	_				RBC for T	ар						1		0.00		020 11	
Identifier	Background	FDEPG	CTL	FEDMCL	Water	.,	17G0250	1	17G02601	17G0	2701	17G028	01	17G029	01	17G030	01
Sampling Date						L	18-Jun-9	8	17-Jun-98	17-Ju	n-98	17-Jun-	98	23-Jun-	98	23-Jun-	98
Volatile Organics, μg/L			2		20												Γ
1,1-Dichloroethane		70	mc/st	ND	810	n										<u> </u>	†-
1,1-Dichloroethene		7	p/c	.7	0.044	С				6	.1 J	<u> </u>			$\vdash$		+
Carbon disulfide		700	mc/st	ND	1000 n			-							<u> </u>		<del> </del>
Chloroform		5.7	mc/c	100	0.15	С							<b>†</b>			<b></b>	+-
Chloromethane		2.7	mc/c	ND	1.4	С					-				-		+-
cis-1,2-Dichloroethene		70	p/st	70	61	n	0.78	J	1.9 J	31	io o	2.3	J		$\vdash$	1.1	1
m-Dichlorobenzene		10	mc/o	ND	540	n						<u> </u>				1	۲
n-Butylbenzene		ND		ND	61	n					_				1	1.5	+
n-Propylbenzene		ND		ND	61	п						1				0.81	-
Tetrachloroethene		3	p/c	5	1.1	С	0.49	J				<del> </del>			-	0.01	۲
Toluene		40	s/st	1000	750	n				1	.8 J	<u> </u>			-	<del> </del>	-
trans-1,2-Dichloroethene		100	p/st	100	120	n					2		$\vdash$				$\vdash$
Trichloroethene		3	p/c	5	1.6	<del></del>	39				Ö	1.4	j	2.5			-
Vinyl chloride		1	p/c	2	0.019	С			13	36	26703	<u> </u>		,		7462K4	1
Semivolatile Organics, µg/L																1	
bis(2-Ethylhexyl)phthalate		6	p/c	6	4.8 c	<b> </b>	NA		NA	l N	A	NA.		NA	L	NA	-

Well ID							OLD-17-25	OLD-17-2	6 OLD-17-2	7 OLD-17-2	28 OLD-17-29	OLD-17-30
					RBC for Ta	ар						
Identifier	Background	FDEPO	CTL	FEDMCL	Water		17G02501	17G0260	1 17G0270	1 17G0280	1 17G02901	17G03001
Sampling Date							18-Jun-98	17-Jun-98	3 17-Jun-98	3 17-Jun-9	8 23-Jun-98	23-Jun-98
Inorganics, µg/L												
Aluminum	4,067	200	s	ND	37,000	n	NA	NA	NA	NA NA	NA NA	NA
Antimony	4.1	6	p/st	6	15	n	NA	NA	NA	NA	NA NA	NA
Arsenic	5	50	p/c	50	0.045 /11	c/n	NA	NA	NA	NA NA	NA NA	NA
Barium	31.4	2,000	p/st	2,000	2,600	n	NA	NA	NA	NA NA	NA NA	NA NA
Beryllium		4	p/c	4	0.016	С	NA	NA	NA NA	NA	NA NA	NA NA
Calcium	36,830	ND		ND	1,000,000		NA	NA	NA NA	NA	NA NA	NA
Chromium	7.8	100	р	100	180	n	NA	NA	NA	NA	NA	NA
Copper	5.4	1,000	s/st	ND	1500	n	NA	NA	NA	NA	NA	NA
Iron	1,227	300	s	ND	11000	n	NA	NA	NA	NA	NA	NA
Lead	4	15	p/st	15	15		NA	NA	NA NA	NA NA	NA	NA
Magnesium	4,560	ND		ND	118,807		NA	NA	NA	NA	NA NA	NA NA
Manganese	17	50	s/st	ND	180	n	NA	NA NA	NA	NA	NA	NA NA
Nickel		100	p/st	100	730	n	NA	NA	NA	NA	NA	NA NA
Potassium	5,400	ND		ND	297,016		NA	NA	NA NA	NA	NA	NA NA
Silver		100	s/st	ND	180	n	NA	NA	NA	NA	NA NA	NA NA
Selenium	9.7	50	p/st	50	180	n	NA	NA	NA	NA	NA	NA NA
Sodium	18,222	160,000	р	DI	396,022		NA	NA	NA	NA	NA NA	NA NA
Thallium	3.8	2	р	2	2.9	n	NA	NA	NA	NA	NA	NA
Vanadium	20.6	49	mc/st	ND	260	n	NA	NA	NA	NA	NA	NA
Zinc	4	5,000	s/st	ND	11000	n	NA	NA	NA	NA	NA	NA
General chemistry, mg/L												
Total Suspended Solids	ND	ND		ND	ND	[	NA	NA	NA NA	NA NA	NA NA	NA

Appendix B

Table B-3.1 Summary of Positive Detections in Groundwater Analytical Results

Study Area 17

Well ID							OLD-17	-31	OLD-17	-3
ldentifier	Background	FDEPO	GCTL	FEDMCL	RBC for T Water	ар	17G031	01	17G032	201
Sampling Date							23-Jun-	98	23-Jun-	98
Volatile Organics, µg/L										T
1,1-Dichloroethane		70	mc/st	ND	810	n	T	1	1	+
1,1-Dichloroethene		7	p/c	7	0.044	С		1		t
Carbon disulfide		700	mc/st	ND	1000 n	T			<b>†</b>	$\dagger$
Chloroform		5.7	mc/c	100	0.15	С	1		1	T
Chloromethane		2.7	mc/c	ND	1.4	С		<del> </del>	<del></del>	$\dagger$
cis-1,2-Dichloroethene		70	p/st	70	61	n	220		84	
m-Dichlorobenzene		10	mc/o	ND	540	n		-		-
n-Butylbenzene		ND		ND	61	n			<del>                                     </del>	╁╴
n-Propylbenzene		ND		ND	61	n				
Tetrachloroethene		3	p/c	5	1,1	С	f	-		$\vdash$
Toluene		40	s/st	1000	750	n	1	J	<del>                                     </del>	$\vdash$
trans-1,2-Dichloroethene		100	p/st	100	120		2.2		1.9	
Trichloroethene		3	p/c	5	1.6		<del></del>	-	1	۲
Vinyl chloride			p/c	2	0.019		130		82	
Semivolatile Organics, µg/L										
pis(2-Ethylhexyl)phthalate		6	p/c	6	4.8 C		NA	—	NA.	<u> </u>

Appendix B
Table B-3.1. Summary of Positive Detections in Groundwater Analytical Results
Study Area 17

Well ID							1	OLD-17-31	OLD-17-3
						RBC for Ta	р		
ldentifier	Background	FDEPG	CTL	FEDMCL		Water		17G03101	17G03201
Sampling Date					_}			23-Jun-98	23-Jun-98
norganics, µg/L									_
Aluminum	4,067	200	s	ND		37,000	n	NA	NA
Antimony	4.1	6	p/st	6	$\perp$	15	ח	NA	NA NA
Arsenic	5	50	p/c	50		0.045 /11	c/n	NA	NA NA
Barium	31.4	2,000	p/st	2,000		2,600	n	NA	NA NA
Beryllium		4	p/c	4		0.016	С	NA	NA
Calcium	36,830	ND		ND		1,000,000		NA	NA
Chromium	7.8	100	p	100		180	n	NA	NA
Copper	5.4	1,000	s/st	ND		1500	n	NA	NA
Iron	1,227	300	s	ND		11000	n	NA	NA
Lead	4	15	p/st	15		15		NA	NA
Magnesium	4,560	ND		ND		118,807		NA	NA NA
Manganese	17	50	s/st	ND		180	n	NA	NA
Nickel		100	p/st	100		730	n	NA	NA
Potassium	5,400	ND		ND		297,016		NA	NA
Silver		100	s/st	ND		180	n	NA	NA
Selenium	9.7	50	p/st	50		180	n	NA	NA
Sodium	18,222	160,000	р	ND		396,022		NA	NA
Thallium	3.8	2	р	2		2.9	n	NA	NA NA
Vanadium	20.6		mc/st	ND		260	n	NA	NA
Zinc	4	5,000	s/st	ND		11000	n	NA NA	NA
General chemistry, mg/L							L	<b></b>	
Total Suspended Solids	ND	ND		ND		NO.		NA	NA NA

Naval Training Center, Orlando Orlando, FL

#### NOTES:

Groundwater background screening value is twice the average of detected concentrations for inorganic analytes.

FDEPGCTL = Florida Department of Environmental Protection, Groundwater Cleanup Target Levels, Chapter 62-785 FAC, April 30, 1998.

FEDMCL= Federal Maximum Contaminant Levels, Primary Drinking Water Regulations and Health Advisories, February 1996.

RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.I. Smith—RBC for chromium is based on chromium VI. RBC for lead is not available, value is treatment technology action limit for lead in drinking water distribution system—identified in Drinking Water Standards and Health Advisories (USEPA, 1995). For essential nutrients (calcium, magnesium, potassium, and sodium) screening values were derived based on recommended daily allowances.

OLD-17-T24 is a temporary well installed during initial site screening. Sample collected from this well on 6/2/95 renamed to 17G024T1 to resolve conflict with sample taken at OLD-17-24 on 6/18/98.

- s = secondary groundwater standard
- st = systemic toxicant
- mc = based on minimum criteria
- p = primary standard
- o = organoleptic.
- n = noncarcinogenic effects
- c = carcinogen (GCTLs) or carcinogenic effects (RBCs).
- ND = Not determined.
- NA = Not analyzed.

USEPA = U.S. Environmental Protection Agency.

- B = Reported concentration is between the instrument detection limit and the contract required detection limit.
- J = Reported concentration is an estimated quantity
- D = Reported concentrations if from a dilution/reanalysis.
- μg/L = micrograms per liter.
- mg/L = miligrams per liter.

Bold/shaded numbers indicate exceedance of groundwater guidance and background.

Blank space indicates analyte/compound was not detected at the reporting limit.

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Table B-3.2. Summary of Positive Detections in DPT Groundwater Analytical Results, Groundwater Evaluation, Phase II
Study Area 17

ldentifier	FDEPG	SCTL	FEDMCL	RBC for Wate		17Q001	04	17Q002	02	17Q003	305	17Q00	308	17Q004	103	17Q00	703	17Q010	205
Sampling Date						18-Mar-9	98	17-Mar-	98	17-Mar	-98	4-Apr-		17-Mar		18-Mar		21-Mar	
Volatile Organics, µg/L											T		Ī	1	Ť	10 10101		2.1 (110)	100
1,1,2-Trichloroethane	5	p/c	5	0.19	С						1	0.51	JВ	<b> </b>	1	<del>                                     </del>	一		<del> </del>
1,1-Dichloroethene	7	p/c	7	0.044	С	2.8	J	78	j		T		=			<del>                                     </del>	<del> </del>	3.3	1
1,2-Dichloroethene (total)	63	mc/st	70	61	n								$\vdash$		-			5.5	-
Acetone .	700	mc/st	ND	3700	n			-	-		1	1	一		1			-	
Bromoform	4.4	mc/c	100	2.4	С					1		0.58	JΒ		$\vdash$		-		<u> </u>
Carbon disulfide	700	mc/st	ND	1000	n													<del> </del>	
Chloromethane	2.7	mc/c	ND	1.4	С						<b> </b>	ļ				1.1			
cis-1,2-Dichloroethene	70	p/st	70	61	n	480		5900		8.6		8.7		1300		<u> </u>	-	3 8 7/20	
Hexachlorobutadiene	0.5	mc/c	ND	0.14	С					E 12 2.1	J				-			Bul Manus Manufuri	
m-Dichlorobenzene	600	p/st	ND	540	n							0.65	JΒ				_		
Naphthalene	20	o/st	ND	ND		9.3	J			4.2	J		<b> </b>					l	
o-Dichlorobenzene	600	p/st	600	64	n							0.89	J						
p-Dichlorobenzene	75	p/c	75	0.44	С							0.86			1				
Toluene	40	s/st	1000	750	n	1.9	J				!			21	J			ļ	
trans-1,2-Dichloroethene	100	p/st	100	120	n			69	J	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								11	
Trichloroethene	3	p/c	5	1.6	С	380		1300		0.82	J	1.1	J	5700				640	
Vinyl chloride	1	p/c	2	0.019	c	199		2300		- 2	J	9,6	J	230	J			SEN 18	J

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Table B-3.2. Summary of Positive Detections in DPT Groundwater Analytical Results, Groundwater Evaluation, Phase II
Study Area 17

#### Naval Training Center, Orlando Orlando, FL

Identifier	FDEPG	CTL	FEDMCL	RBC for Tap Water	17Q0120	3 170	201303	17Q0130	6 17Q016	07	17Q0170	4 1	17Q0200	02	17Q0210	02
Sampling Date					20-Mar-9	8 20-	Mar-98	4-Apr-98	4-Apr-9	8	25-Mar-9	8	7-Apr-98	8	7-Apr-9	8
Volatile Organics, μg/L										-						igspace
1,1,2-Trichloroethane	5	p/c	5	0.19 c						<u> </u>	<u> </u>					_
1,1-Dichloroethene	7	p/c	7	0.044 c	17	J S	14 J				ļ				Distriction of the second	
1,2-Dichloroethene (total)	63	mc/st	70	61 n						<u> </u>		16	3400		<b>编算数</b> 73	L
Acetone	700	mc/st	ND	3700 n												<u> </u>
Bromoform	4.4	mc/c	100	2.4 c						L						<u> </u>
Carbon disulfide	700	mc/st	ND	1000 n		l				<u> </u>						<del> </del>
Chloromethane	27	mc/c	ND	1 4 C						_						<u> </u>
cis-1,2-Dichloroethene	70	p/st	70	61 n	1900	- <b>4</b> 6	790	5.6		<u> </u>						<u> </u>
Hexachlorobutadiene	0.5	mc/c	ND	0 14 c						<u> </u>						<u> </u>
m-Dichlorobenzene	600	p/st	ND	540 n		_										$\perp$
Naphthalene	20	o/st	ND	ND												_
o-Dichlorobenzene	600	p/st	600	64 n												<del> </del>
p-Dichlorobenzene	75	p/c	75	0.44 c												$oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol}}}}}}}}}}}}}}}}}$
Toluene	40	s/st	1000	750 n						<u> </u>	<u> </u>					<del> </del>
trans-1,2-Dichloroethene	100	p/st	100	120 n	54	more med	45			-						+-
Trichloroethene	3	p/c	5	1.6 C	7.75		300	8.7	1.9	J	ER SOCIAL				1.5	<u>' J</u> _
Vinyl chloride	1	p/c	2	0.019 c	140	130	98 J									<u> </u>

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Table B-3.2 Summary of Positive Detections in DPT Groundwater Analytical Results, Groundwater Evaluation, Phase II Study Area 17

ldentifier	FDEPO	CTL	FEDMC	RBC fo		17Q024	04	17Q02703	17Q028	05	17Q0300	01
Sampling Date						8-Apr-9	8	9-Apr-98	8-Apr-9	8	9-Apr-9	8
Volatile Organics, μg/L												Γ
1,1,2-Trichloroethane	5	p/c	5	0.1	9 c							
1,1-Dichloroethene	7	p/c	7	0.04	4 c				0.17	J	0.12	j
1,2-Dichloroethene (total)	63	mc/st	70	6	1 n			31	12		9.4	
Acetone	700	mc/st	ND	370	) n	38			20	Г		
Bromoform	4.4	mc/c	100	2.	4 c							T
Carbon disulfide	700	mc/st	ND	100	n	4		4.8	1.4			T
Chloromethane	2.7	mc/c	ND	1.	1 c	0.15	J		0.12	J		T
cis-1,2-Dichloroethene	70	p/st	70	6	l n							T
Hexachlorobutadiene	0.5	mc/c	ND	0.1	1 c							Γ
m-Dichlorobenzene	600	p/st	ND	54	) n							
Naphthalene	20	o/st	ND	N								Γ
o-Dichlorobenzene	600	p/st	600	64	↓ n							
p-Dichlorobenzene	75	p/c	75	0.4	l c				4			Ť
Toluene	40	s/st	1000	750	) n				1.		0.09	J
trans-1,2-Dichloroethene	100	p/st	100	120	) n							Γ
Trichloroethene	3	p/c	5	1.6	C				2.3			
Vinyl chloride	1	p/c	2	0.019	С				5.7			ı

#### Appendix B

### Table B-3.2. Notes to Summary of Positive Detections in DPT Groundwater Analytical Results, Groundwater Evaluation, Phase II Study Area 17

Naval Training Center, Orlando Orlando, FL

#### NOTES:

FDEPGCTL = Florida Department of Environmental Protection, Groundwater Cleanup Target Levels, Chapter 62-785 FAC, April 30, 1998.

FEDMCL= Federal Maximum Contaminant Levels, Primary Drinking Water Regulations and Health Advisories, February 1996.

RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.L. Smith.

s = secondary groundwater standard.

st = systemic toxicant.

mc = based on minimum criteria

p = primary standard.

n = noncarcinogenic effects.

c = carcinogen (GCTLs) or carcinogenic effects (RBCs).

ND = Not determined

USEPA = U.S. Environmental Protection Agency

I = Reported concentration is an estimated quantity

B = Compound also found in associated laboratory blank.

μg/L = micrograms per liter.

mg/L = miligrams per liter.

Bold/shaded numbers indicate exceedance of groundwater guidance and background

Blank space indicates analyte/compound was not detected at the reporting limit.

#### TABLE B-4

SUMMARY OF DETECTIONS IN SURFACE WATER ANALYTICAL RESULTS

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Table B-4. Summary of Positive Detections in Surface Water Analytical Results, Study Area 17

identifier	Surface Screenin			17W0260	0	17W02700	17W028	00	17W029	00	17W03001	17W03101	17W03201	17W03301	17W03401
Sampling Date				5/16/95		5/16/95	5/16/95	1	5/16/95	T-	6/23/98	6/23/98	6/23/98	6/23/98	6/23/98
Volatile Organics, μg/L															
Acetone	700	(6)		13		9 J			7	J					
Chloroform	289	(2)							1	<b> </b>		0.92 J	<del>  -  </del>		
Toluene	40	(6)	1	8	J						5.2	20	17	18	25
Trichloroethene	3		•								1.2 J			<del> </del>	
Vinyl chloride	1	(6)			-							0.78 J			
Semivolatile Organics, µg/L				100											
4-Methylphenol	35	(6)	T	2				T	†		NA	NA	NA	NA NA	NA
Phenol	256	(2)		4	1						NA	NA	NA	NA NA	NA NA
inorganics, µg/L												ŀ			
Aluminum	87	(1,4)		1050		944	418		+ ##173	В	NA	NA	NA	NA	NA
Barium	2,000	(8)		31.7	В	26.4 B	367		122	В	NA	NA	NA	NA	NA
Beryllium	0.13	(3)		0.13	В	0,25 B			0.1	В	NA	NA	NA	NA	NA
Calcium	1,055,398	(7)		22,100		19,300	29,500		34,800		NA	NA	NA	NA	NA
Iron	1,000	(1,3)		9400		4000	2140		1 1790		NA	NA	NA	NA	NA
Lead	1.7	(1,5)		4.9			2.4	В			NA	NA	NA	NA	NA
Magnesium	118,807	(7)		2020	В	2,520 B	4,350	В	6,230		NA	NA	NA	NA	NA
Manganese	50	(6)		73.8		30.9	22		16.2		NA	NA	NA	NA	NA
Potassium	297,016	(7)		1930	В	3,220 B	1,420	В	1,140	В	NA	NA	NA	NA	NA
Silver	0.012	(3)		2.6	В						NA	NA	NA	NA	NA
Sodium	396,022	(7)	-	2,180	В	2,730 B	7,580		14,600		NA	NA	NA	NA	NA NA
Zinc	67	(1,5)		37.5		52.1	23.5				NA	NA	NA	NA	NA NA
General chemistry, mg/L															,,,,
Alkalinity as CaCO3	NA			47		39	71		97		NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons	NA			1		2.8	2.4		2		NA	NA	NA	NA NA	NA

#### Appendix B

#### Table B-4. Notes to Summary of Positive Detections in Surface Water Analytical Results, Study Area 17

#### Naval Training Center, Orlando Orlando, FL

#### NOTES:

Federal Ambient Water Criteria, chronic values (USEPA, 1991; 1988)

² USEPA Region IV Waste Management Division Chronic Freshwater Quality Screening Values based on the Water Quality Standards Units Screening List (USEPA, 1992).

Chapter 62-302. Florida Administrative Code Surface Water Quality Standards; 1995

⁴ Criterion is based on pH of 6.5 - 9 (USEPA, 1988)

Hardness dependent criterion. Values shown are for SA 16/SA 17/SA 22. Average water hardnesses of 30, 63.5, and 19.3 mg/L CaCO3 were used to calculate criteria for Study Areas 16,

17, and 22, respectively. The average water hardness of 19.3 mg/L for Study Area 22 is below the range of water hardnesses to be used in calculating AWQC (i.e., 25 to 400 mg/L). Therefore, a hardness of 25 mg/L (the lowest usable hardness value) was used to calculate criteria for Study Area 22.

Florida Department of Environmental Protection Groundwater Guidance Concentration, June 1994, Systemic Toxicant.

Risk-Based Concentration Table, USEPA Region III, October, 1995, R.L. Smith. For essential nutrients (calcium, magnesium, potassium, and sodium) screening values were based on recommended daily allowances (RDAs).

8 Florida Department of Environmental Protection Guidance Concentration, June 1994, Primary Standard.

J = Reported concentration is an estimated quantity.

μg/L = micrograms per liter.

mg/L = milligrams per liter.

B = Reported concentration is between the instrument detection limit and Contract Required Detection Limit.

Blank space indicates analyte/compound was not detected at the reporting limit.

TABLE B-5

SUMMARY OF DETECTIONS IN SEDIMENT ANALYTICAL RESULTS

## Appendix B Table B-5. Summary of Positive Detections in Sediment Analytical Results Study Area 17

ldentifier	FDEP PEL	. 17D02600	17D02700	17D02800	17D02900	17D03001	17D03101	17D03201	17D03301	17D03401
Sampling Date		5/26/95	5/26/95	5/26/95	5/26/95	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
Volatile Organics, μg/kg										
Methylene chloride	ND					4.4 J	4.8 J	5.1 J	6 J	3.6 J
Toluene	ND								1 J	0.51 J
Vinyl chloride	ND						0.72 J			
2-Butanone	ND		6 J							
Acetone	ND	9 J	21	30	14 J					
Semivolatile Organics, µg/kg										
Acenaphthene	450			410 J		NA	NA	NA	NA	NA
Anthracene	740			310 J		NA	NA	NA	NA	NA
Benzo(a)anthracene	1300			1,000		NA	NA	NA	NA	NA
Benzo(b)fluoranthene	ND			660 J		NA	NA	. NA	NA	NA
Benzo(k)fluoranthene	ND			590 J		NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	ND			630 J		NA	NA	NA	NA	NA
Chrysene	1700			820		NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	320			210 J		NA	NA	NA	NA	NA
Fluoranthene	3200		150 J	2,100	180 J	NA	NA	NA	NA	NA
Fluorene	ND			320 J		NA	NA	NA	NA	NA
Phenanthrene	1200			700		NA	NA	NA	NA	NA
Pyrene	1900			540 J		NA	NA	NA	NA	NA
Pesticides/PCBs, µg/kg										
4,4'-DDD	ND		19 J	990 DJ	24 NJ	NA	NA	NA	NA	NA
4,4'-DDE	130		13	130 J	15	NA	NA	NA	NA	NA
alpha-Chlordane	ND	' '	5.4	890 CD	14	NA	NA	NA	NA	NA
Dieldrin	ND			- 300	3.3 J	NA NA	NA NA	NA NA	NA NA	NA NA
gamma-Chlordane	ND		11	1,800 CD	41	NA NA	NA NA	NA NA	NA NA	NA NA
Inorganics, mg/kg			1	.,				14/4	180	
Aluminum	ND	520	2,480	2,970	1,540	NA	NA	NA NA	NA NA	NA
Arsenic	64	1.5 B	1.6 J	3.5 J	1.5 J	NA	NA	NA	NA	NA NA
Barium	ND	1.7 B	9.2 B	21.4 B	6.8 B	NA	NA	NA	NA NA	NA NA
Beryllium	ND		0.11 B	0.22 B	0.15 B	NA NA	NA	NA NA	NA NA	NA NA

## Appendix B Table B-5. Summary of Positive Detections in Sediment Analytical Results Study Area 17

ldentifier	FDEP PE	L 17D02600	17D02700	17D02800	17D02900	17D03001	17D03101	17D03201	17D03301	17D03401
Sampling Date		5/26/95	5/26/95	5/26/95	5/26/95	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
Cadmium	7.5				1.4 B	NA	NA .	NA	NA	NA
Calcium	ND	112 B	353 B	12,600	14,500	NA	NA	NA	NA	NA
Chromium	240	0.95 B	3.9	8.6	4.6	NA	NA	NA	NA	NA
Cobalt	ND			2.3 B		NA	NA	NA	NA	NA
Copper	170	1.1 B	4.2 B	11.1 B	3.9 B	NA	NA	NA	NA	NA
Iron	ND	232	1,470	2,500	1,250	NA	NA	NA	NA	NA
Lead	160	0.89 J	15.1 J	45.2 J	15.8 J	NA	NA	NA	NA	NA
Magnesium	ND	12 B	80.3 B	191 B	141 B	NA	NA	NA	NA	NA
	ND	0.3 B	1.4 B	4.7 B	2.1 B	NA	NA	NA	NA	NA
Manganese	1.4	0.0	0.09	0.27	0.06 B	NA	NA	NA	NA	NA
Mercury		1	10.1 B	23.5 B	22.3 B	NA	NA	NA	NA	NA
Sodium	ND	2.5	4.7 B	10.2 B	6.1 B	NA NA	NA	NA	NA	NA
Vanadium	ND	2.5 B	<b>↓</b>		- <del></del>	<del>                                     </del>	NA NA	NA NA	NA	NA
Zinc	300	6.2	30.5	78.5	35	NA	I NA	11/4		
General chemistry, mg/kg			l				1	<del></del>	<del>  </del>	<del> </del>
Total Organic Carbon	NA	2,130	7,800	24,400	9,770	NA	NA NA	NA NA	NA	NA NA
Total Petroleum Hydrocarbons	NA	5.5	73.5	892	162	NA	NA NA	NA NA	NA	NA NA

## Appendix B Table B-5. Notes to Summary of Positive Detections in Sediment Analytical Results Study Area 17

Naval Training Center, Orlando Orlando, FL

#### NOTES:

FDEP PEL = Florida Department of Environmental Protection, Probable Effects Level from MacDonald, 1994.

Approach to the Assessment of Sediment Quality in Florida Coastal Waters. Volume 1 - Development and Evaluation of Sediment Quality Guidelines.

Prepared by MacDonald Environmental Sciences, Ltd.

ND = Not determined.

mg/kg = milligrams per kilogram

μg/kg = micrograms per liter.

- J = Reported concentration is an estimated quantity.
- B = For inorganics, reported concentration is between the instrument detection limit and Contract Required Detection Limit.
- C = Presence of this compound was confirmed by GC/MS (gas chromatograph/ mass spectrometry)
- D = Indicates value was determined during a diluted reanalysis.

All inorganics results expressed in milligrams per kilogram (mg/kg) soil dry weight; organics in micrograms per kilogram (µg/kg) soil dry weight.

Blank space indicates analyte/compound was not detected at the reporting limit.

#### **APPENDIX C**

## SUMMARY OF ANALYTICAL RESULTS (CONTRACT LABORATORY)

Table C-1	Summary of S	oil Analytical Results
Table C-2	Summary of S	oil Analytical Results, PAH Confirmation Samples
Table C-3	Summary of G	Froundwater Analytical Results
	Table C-3.1	Initial Screening
	Table C-3.2	Volatile Organics, Phase I
	Table C-3.3	Volatile Organics, Phase II
	Table C-3.4	DPT Screening, Volatile Organics, Phase II
Table C-4	Summary of S	urface Water Analytical Results
Table C-5	Summary of S	ediment Analytical Results

TABLE C-1
SUMMARY OF SOIL ANALYTICAL RESULTS

## Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

										- 1			
Sample ID	17B00101	17B00201	17B00301	17B00401	17B00502	17B00701	17B00801	17B00901	17B01001	17B01101	17B01101D	17B01201	17B01301
Lab ID	G7583004	G7562004	G7583007	G7583006	G7583005	G7427001	G7427002	G7427003	G7427004	G7427005	G7427006	G7678011	G767801
Sampling Date	15-May-95	14-May-95	16-May-95	16-May-95	15-May-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-May-95	26-May-9
Volatile organics, µg/kg													
1,1,1-Trichloroethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
1,1,2,2-Tetrachloroethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
1,1,2-Trichloroethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
1,1-Dichloroethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
1,1-Dichloroethene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
1,2-Dichloroethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
1,2-Dichloroethene (total)	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
1,2-Dichloropropane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
2-Butanone	12 U	12 U	3 J	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
2-Hexanone	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
4-Methyl-2-pentanone	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Acetone	28	12 U	23	12 U	41	12 J	11 U	12 U	13	12 U	10 J	13	16
Benzene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Bromodichloromethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Bromoform	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Bromomethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Carbon disulfide	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Carbon tetrachloride	12 U	12 U	12 Ú	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Chlorobenzene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Chloroethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Chloroform	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Chloromethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
cis-1.3-Dichloropropene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Dibromochloromethane	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Ethylbenzene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Methylene chloride	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Styrene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Tetrachloroethene	12 U	12 U	12 U.	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Toluene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
trans-1,3-Dichloropropene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Trichloroethene	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Vinyl chloride	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U	12 U	12 U
Xylene (total)	12 U	12 U	12 U	12 U	12 U	12 U	11 U	12 U	13 U	12 U	12 U :-	12 U	12 U
Semivolatile organics, µg/kg											1		
1.2.4-Trichlorobenzene	540 U	400 U	0 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	'410 U	400 U	390 U
1.2-Dichlorobenzene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
1.3-Dichlorobenzene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
1.4-Dichlorobenzene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2.2'-oxybis(1-Chloropropane)	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
-,- oxypio(i oraciopiopalic)	0.0,0	1 .00,0	1									I	

## Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

									···-				
Sample ID	17B00101	17B00201	17B00301	17B00401	17B00502	17B00701	17B00801	17B00901	17B01001	17B01101	17B01101D	17B01201	17B01301
Lab ID	G7583004	G7562004	G7583007	G7583006	G7583005	G7427001	G7427002	G7427003	G7427004	G7427005	G7427006	G7678011	G7678012
Sampling Date	15-May-95	14-May-95	16-May-95	16-May-95	15-May-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-May-95	26-May-95
2,4,5-Trichlorophenol	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	970 U
2,4,6-Trichlorophenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2,4-Dichlorophenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2,4-Dimethylphenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2,4-Dinitrophenol	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	970 U
2,4-Dinitrotoluene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2,6-Dinitrotoluene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2-Chloronaphthalene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2-Chlorophenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2-Methylnaphthalene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	140 J
2-Methylphenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
2-Nitroaniline	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	970 U
2-Nitrophenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
3,3'-Dichlorobenzidine	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
3-Nitroaniline	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	970 U
4,6-Dinitro-2-methylphenol	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	970 U
4-Bromophenyl-phenylether	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
4-Chloro-3-methylphenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
4-Chloroaniline	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
4-Chlorophenyl-phenylether	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
4-Methylphenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
4-Nitroaniline	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	970 U
4-Nitrophenol	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	970 U
Acenaphthene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	1300
Acenaphthylene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Anthracene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	2100
Benzo(a)anthracene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	5300 D
Benzo(a)pyrene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	4500 D
Benzo(b)fluoranthene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	4900 D
Benzo(g,h,i)perylene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	3300 D
Benzo(k)fluoranthene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	2500
bis(2-Chloroethoxy)methane	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
bis(2-Chloroethyl)ether	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
bis(2-Ethylhexyl)phthalate	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Butylbenzylphthalate	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	,410 U	400 U	390 U
Carbazole	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	1700
Chrysene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	5300 D
Di-n-butylphthalate	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Di-n-octy/phthalate	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Dibenz(a,h)anthracene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	1200

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## Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

10 W												- 19	
Sample ID	17B00101	17B00201	17B00301	17B00401	17B00502	17B00701	17B00801	17B00901	17B01001	17B01101	17B01101D	17B01201	17B01301
Lab ID	G7583004	G7562004	G7583007	G7583006	G7583005	G7427001	G7427002	G7427003	G7427004	G7427005	G7427006	G7678011	G7678012
Sampling Date	15-May-95	14-May-95	16-May-95	16-May-95	15-May-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-May-95	26-May-95
Dibenzofuran	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	700
Diethylphthalate	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Dimethylphthalate	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Fluoranthene	540 U	400 U	400 U	400 U	410 U	420 U	130 J	390 U	410 U	410 U	410 U	400 U	12000 D
Fluorene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	1400
Hexachlorobenzene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Hexachlorobutadiene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Hexachlorocyclopentadiene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Hexachloroethane	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Indeno(1,2,3-cd)pyrene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	3100
Isophorone	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	-390 U
N-Nitroso-di-n-propylamine	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
N-Nitrosodiphenylamine (1)	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Naphthalene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	≥170 J≪
Nitrobenzene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Pentachlorophenol	1300 U	1000 U	1000 U	1000 U	1000 U	1000 U	900 U	970 U	1000 U	1000 U	1000 U	990 U	-970 U
Phenanthrene	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	10000 D
Phenol	540 U	400 U	400 U	400 U	410 U	420 U	360 U	390 U	410 U	410 U	410 U	400 U	390 U
Pyrene	540 U	400 U	400 U	400 U	410 U	420 U	140 J	390 U	410 U	410 U	410 U	400 U	9700 D
Pesticides/PCBs, µg/kg													
4,4'-DDD	4 U	3.9 U	4.1 U	4 U	4.2 U	8 U	9.1 U	3.8 U	4.1 U	3.4 J	55 D	4 U	38 U
4,4'-DDE	4 U	3.9 U	4.1 U	4 U	4.2 U	7.7 NJ	9.1 U	3.8 U	4.1 U	1.5 J	16	4 U	38 U
4,4'-DDT	4 U	3.9 U	2.9 J	1.6 J	4.2 U	8 U	9.1 U	3.8 U	4.1 U	2.9 J	28	4 U	38 U
Aldrin	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	2 U	2 U	20 U
alpha-BHC	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	2 U	2 U	20 U
alpha-Chlordane	2 U	2 U	1 J	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	0.86 J	2 U	20 U
Aroclor-1016	40 U	39 U	41 U	40 U	42 U	80 U	91 U	38 U	41 U	39 U	40 U	40 U	380 U
Aroclor-1221	81 U	79 U	83 U	81 U	85 U	160 U	180 U	77 U	83 U	80 U	81 U	81 U	780 U
Aroclor-1232	40 U	39 U	41 U	40 U	42 U	80 U	91 U	38 U	41 U	39 U	40 U	40 U	380 U
Aroclor-1242	40 U	39 U	41 U	40 U	42 U	80 U	91 U	38 U	41 U	39 U	40 U	40 U	380 U
Aroclor-1248	40 U	39 U	41 U	40 U	42 U	80 U	91 U	38 U	41 U	39 U	40 U	40 U	380 U
Aroclor-1254	40 U	39 U	41 U	40 U	42 U	80 U	91 U	38 U	41 U	39 U	40 U	40 U	380 U
Aroclor-1260	40 U	39 U	41 U	40 U	42 U	80 U	91 U	38 U	41 U	39 U	40 U	40 U	380 U
beta-BHC	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	2 U	2 U	20 U
delta-BHC	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	, 2 U	2 U	20 U
Dieldrin	4 U	3.9 U	4.1 U	4 U	4.2 U	15	9.1 U	3.8 U	4.1 U	3.9 U	4 U	4 U	38 U
Endosulfan I	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	2 U	2 U	20 U
Endosulfan II	4 U	3.9 U	4.1 U	4 U	4.2 U	8 U	9.1 U	3.8 U	4.1 U	3.9 U	4 U	4 U	38 U
Endosulfan sulfate	4 U	3.9 U	4.1 U	4 U	4.2 U	8 U	9.1 U	3.8 U	4.1 U	3.9 U	4 U	-4 U	38 U
Endrin	4 U	3.9 U	4.1 U	4 U	4.2 U	8 U	9.1 U	3.8 U	4.1 U	3.9 U	4 U	4 U	38 U

## Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

Naval Training Center, Orlando Orlando, FL

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Sample ID	17B00101	17B00201	17B00301	17B00401	17B00502	17B00701	17B00801	17B00901	17B01001	17B01101	17B01101D	17B01201	17B01301
Lab (D	G7583004	G7562004	G7583007	G7583006	G7583005	G7427001	G7427002	G7427003	G7427004	G7427005	G7427006	G7678011	G7678012
Sampling Date	15-May-95	14-May-95	16-May-95	16-May-95	15-May-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-Apr-95	26-May-95	26-May-95
Endrin aldehyde	4 U	3.9 U	4.1 U	4 U	4.2 U	8U	9.1 U	3.8 U	4.1 U	3.9 U	4 U	4 U	38 U
Endrin ketone	4 U	3.9 U	4.1 U	4 U	4.2 U	7.3 J	9.1 U	3.8 U	4.1 U	3.9 U	4 U	4 U	38 U
gamma-BHC (Lindane)	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	2 U	2 U	20 U
gamma-Chlordane	2 U	2 U	1.2 J	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	1.4 J	2 U	20 U
Heptachlor	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	2 U	2 U	20 U
Heptachlor epoxide	2 U	2 U	2.1 U	2 U	2.2 U	4.1 U	4.7 U	2 U	2.1 U	2 U	2 U	2 U	20 U
Methoxychlor	20 U	20 U	21 U	20 U	22 U	41 U	47 U	20 U	21 U	20 U	20 U	20 U	200 U
Toxaphene	200 U	200 U	210 U	200 U	220 U	410 U	470 U	200 U	210 U	200 U	200 U	200 U	2000 U
Inorganics, mg/kg													
Aluminum	6930	14800	1040	509	313	1390	1080	17900	613	99.6	7870	3080	796
Antimony	7.1 UJ	7 UJ	7.5 UJ	7.3 UJ	7.2 UJ	7.2 U	6.6 U	6.9 U	7.5 U	7 U	6.9 U	7.2 U	6.9 U
Arsenic	0.69 B	0.95 J	0.48 U	0.47 UJ	0.46 U	0.57 U	0.47 U	1.1 U	0.6 U	0.62 U	0.81 U	2.1 B	1.4 J
Barium	7.2 J	16.7 J	4 J	2.7 J	2.7 J	3.9 B	2.3 B	17.6 B	1.7 B	0.34 B	9.8 B	3.8 B	2.1 B
Beryllium	0.03 J	0.12 B	0.03 UJ		0.02 UJ	0.03 U	0.06 U	0.27 U	0.03 U	0.04 U	0.11 U	0.02 U	0.02 U
Cadmium	0.74 U	0.74 U	0.78 U	0.76 UJ	0.76 U	0.76 U	0.69 U	0.72 U	0.79 U	0.73 U	0.72 U	0.76 U	0.72 U
Calcium	171 B	816 B	678 B	3440	33.4 B	306 J	745 J	1320 J	232 J	213 J	7190 J	2650	2220
Chromium	6	12.6	2.2 B	1.6 B	0.76 U	2.6	1.6 B	18.2	1.1 B	0.73 U	6.3	2.7	0.89 B
Cobalt	0.69 U	0.97 B	0.73 U	0.71 U	0.71 U	0.81 B	0.65 U	1.7 B	0.74 U	0.68 U	0.91 B	0.71 U	0.67 U
Copper	0.34 U	0.33 U	0.38 U	0.34 U	0.4 U	0.85 B	0.69 B	0.32 U	0.35 U	0.33 U	0.33 U	1.7 B	0.33 U
Iron	217	666	197	95.6	25.9	1220 J	155 J	1180 J	84.1 J	299 J	447 J	190	204
Lead	4.9 J	11.2 J	2 J	2.1 J	1.8 J	1.8	2.1	4.1	88.0	0.47 B	3.1	1.5 J	0.98 J
Magnesium	41.5 B	132 B	15.8 B	33.1 B	4.9 U	32.6 B	19.5 B	252 B	19.5 B	5.7 B	133 B	45.7 B	38.4 B
Manganese	0.55 B	1.6 B	1.2 B	1 B	0.35 B	0.81 B	1.7 B	- 3 B	0.38 B	0.28 B	1.8 B	0.61 B	1.5 B
Mercury	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 B	0.05	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Nickel	3.4 U	4.3 B	3.6 U	3.5 U	3.5 U	3.5 U	3.2 U	5.9 B	3.6 U	3.4 U	3.3 U	3.5 U	3.3 U
Potassium	106 U	105 U	112 U	109 U	108 U	108 U	98.8 U	176 B	112 U	105 U	104 U	109 U	103 U
Selenium	0.55 U	0.54 U	0.58 U	0.56 U	0.56 UJ	0.56 U	0.51 UJ	0.53 U	0.58 UJ	0.54 UJ	0.54 UJ	0.56 U	0.53 U
Silver	0.62 U	0.62 U	0.66 U	0.64 U	0.63 U	0.63 U	0.58 U	0.6 U	0.66 U	0.61 U	0.61 U	0.64 U	0.6 U
Sodium	4 U	12.4 B	4.3 U	4.2 U	4.1 U	12 U	9.1 U	27.6 B	10.7 U	8.4 U	18.1 U	4.1 U	5.7 B
Thallium	0.43 U	0.43 U	0.46 UJ	0.45 U	0.44 U	1.8 J	0.42 U	0.43 U	0.51 J	0.52 B	0.75 J	0.44 U	0.42 U
Vanadium	10.1 B	19.9	0.77 B	0.62 U	0.67 B	5.7 B	0.89 B	35.8	0.69 B	0.59 U	9.9 B	2.9 B	1.3 B
Zinc	0.66 U	0.95 B	0.91 B	0.54 U	0.81 U	0.51 B	11.4	1.1 B	0.41 B	0.46 B	0.82 B	0.48 B	0.77 B
General Chemistry, mg/kg											_{&gt;} -		
Total Petroleum Hydrocarbons	4.7 U	55.1	5 U	4.9 U	4.8 U	4.9 U	5.8	4.6 U	5.1 U	4:7 U	4.7 U	4.9 U	34.6

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## Appendix C Table C-1 Summary of Soil Analytical Results Study Area 17

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Sample ID	17B01401	17B01501	17B01601	17B01701	17B01801	17B01802	17B01901	17B01902	17B02001	17B02101	17B02101D	17B02201	17B02301
Lab ID	G7678013	G7678010	G7678015	G7678014	G7415006	G7415004	G7427007	G7427008	G7415005	G7415003	G7415002	G7415007	G7678016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	25-Apr-95	25-Apr-95	26-Apr-95	26-Apr-95	25-Apr-95	25-Арг-95	25-Apr-95	25-Apr-95	26-May-95
Volatile organics, µg/kg	20-Way-55	20-Way-55	20 Way 33	20 May 00	20 / (p) 00	207107	20.10.00						1
1,1,1-Trichloroethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
1.1.2.2-Tetrachloroethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
1,1,2-Trichloroethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
1.1-Dichloroethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
1.1-Dichloroethene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
1.2-Dichloroethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
1,2-Dichloroethene (total)	12 U	11 U	12 U	12 Ü	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
1,2-Dichloropropane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
2-Butanone	12 U	11 0	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 Ü	13 U	11 U
2-Hexanone	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
4-Methyl-2-pentanone	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Acetone	28	10 J	15	9 J	11 U	12 U	10 U	8 J	7 J	11 J	14	13 U	), 7 J
Benzene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Bromodichloromethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Bromoform	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Bromomethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Carbon disulfide	12 U	11 0	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Carbon tetrachloride	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	: 11 U
Chlorobenzene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Chloroethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Chloroform	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Chloromethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
cis-1,3-Dichloropropene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Dibromochloromethane	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Ethylbenzene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Methylene chloride	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Styrene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 Ü	12 U	11 U	11 U	13 U	11 U
Tetrachloroethene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Toluene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
trans-1,3-Dichloropropene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Trichloroethene	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U 12 U	11 U	11 U	13 U	11 U
Vinyl chloride	12 U	11 U	12 U	12 U	11 U	12 U	10 U	12 U	12 U	11 U	11 U	13 U	11 U
Xylene (total)	12 U	11 U	12 U	12 U	11 U	12 U	53	12 U	12 0	110	110	13 0	110
Semivolatile organics, µg/kg		l			000 11	400 11	25011	400 11	260 11	390 U	380 U	420 U	360 U
1,2,4-Trichlorobenzene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
1,2-Dichlorobenzene	390 U	370 U	390 U	390 U	360 U	400 U 400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
1,3-Dichlorobenzene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	. 380 U	420 U	360 U
1,4-Dichlorobenzene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2,2'-oxybis(1-Chloropropane)	390 U	370 U	390 U	390 U	360 U	400 0	350/0	4000	300 0	380 0	30010	7200	300 0

## Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

						Huo, F.L.							
Sample ID	17B01401	17B01501	17B01601	17B01701	17B01801	17801802	17B01901	17B01902	17B02001	17B02101	17B02101D	17B02201	17802301
Lab ID	G7678013	G7678010	G7678015	G7678014	G7415006	G7415004	G7427007	G7427008	G7415005	G7415003	G7415002	G7415007	G7678016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	25-Apr-95	25-Apr-95	26-Apr-95	26-Apr-95	25-Apr-95	25-Apr-95	25-Apr-95	25-Apr-95	26-May-95
2,4,5-Trichlorophenol	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
2,4,6-Trichlorophenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2,4-Dichlorophenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2,4-Dimethylphenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2,4-Dinitrophenol	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
2,4-Dinitrotoluene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2,6-Dinitrotoluene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2-Chloronaphthalene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2-Chlorophenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2-Methylnaphthalene	390 U	370 U	390 U	390 U	360 U	400 U	110 J	400 U	360 U	390 U	380 U	420 U	360 U
2-Methylphenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
2-Nitroaniline	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
2-Nitrophenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
3,3'-Dichlorobenzidine	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
3-Nitroaniline	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
4,6-Dinitro-2-methylphenol	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
4-Bromophenyl-phenylether	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
4-Chloro-3-methylphenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
4-Chloroaniline	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
4-Chlorophenyl-phenylether	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
4-Methylphenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
4-Nitroaniline	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
4-Nitrophenol	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
Acenaphthene	390 U	370 U	410	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	150 J
Acenaphthylene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Anthracene	390 U	370 U	540	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Benzo(a)anthracene	110 J	370 U	2600	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	240 J
Benzo(a)pyrene	390 U	370 U	420	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Benzo(b)fluoranthene	390 U	370 U	2000	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	180 J
Benzo(g,h,i)perylene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Benzo(k)fluoranthene	390 U	370 U	1500	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	140 J
bis(2-Chloroethoxy)methane	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
bis(2-Chloroethyl)ether	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
bis(2-Ethylhexyl)phthalate	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Butylbenzylphthalate	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Carbazole	390 U	370 U	250 J	390 U	360 U	400 U	350 U	400 U	360 U	390 U	· 380 U	420 U	360 U
Chrysene	390 U	370 U	2000	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	210 J
Di-n-butylphthalate	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Di-n-octylphthalate	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Dibenz(a,h)anthracene	390 U	370 U	490	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U

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## Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

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Sample ID	17B01401	17B01501	17B01601	17B01701	17B01801	17B01802	17B01901	17B01902	17B02001	17B02101	17B02101D	17B02201	17B02301
Lab ID	G7678013	G7678010	G7678015	G7678014	G7415006	G7415004	G7427007	G7427008	G7415005	G7415003	G7415002	G7415007	G7678016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	25-Apr-95	25-Apr-95	26-Apr-95	26-Apr-95	25-Apr-95	25-Apr-95	25-Apr-95	25-Apr-95	26-May-95
Dibenzofuran	390 U	370 U	220 J	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Diethylphthalate	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Dimethylphthalate	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Fluoranthene	190 J	370 U	4400 D	390 U	170 J	400 U	350 U	400 U	360 U	390 U	380 U	420 U	580
Fluorene	390 U	370 U	500	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Hexachlorobenzene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Hexachlorobutadiene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Hexachlorocyclopentadiene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Hexachloroethane	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Indeno(1,2,3-cd)pyrene	390 U	370 U	360 J	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Isophorone	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
N-Nitroso-di-n-propylamine	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
N-Nitrosodiphenylamine (1)	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Naphthalene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Nitrobenzene	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Pentachlorophenol	970 U	920 U	970 U	970 U	900 U	1000 U	880 U	1000 U	900 U	970 U	950 U	1000 U	900 U
Phenanthrene	120 J	370 U	2600	390 U	110 J	400 U	350 U	400 U	360 U	390 U	380 U	420 U	290 J
Phenol	390 U	370 U	390 U	390 U	360 U	400 U	350 U	400 U	360 U	390 U	380 U	420 U	360 U
Pyrene	390 U	370 U	1200	390 U	110 J	400 U	350 U	400 U	360 U	390 U	380 U	420 U	120 J
Pesticides/PCBs, µg/kg													·
4,4'-DDD	19 U	3.7 U	160	3.9 U	3.5 U	10 U	3.5 U	3.9 U	3.8 U	3.7 U	3.7 U	4.2 U	3.5 ∪
4,4'-DDE	19 U	3.6 J	55 NJ	1.9 J	3.5 U	10 U	4.5	3.9 U	3.8 U	3.7 U	3.7 U	4.2 U	8.7 J
4,4'-DDT	19 U	7.2	200 J	20	3.5 U	10 U	3.5 U	3.9 U	3.8 U	3.7 U	.3.7 U	4.2 U	14 U
Aldrin	9.9 U	1.9 U	20 U	2 U	1.8 U	5.2 U	1.8 U	2 U	2 U	1.9 U	1.9 U	2.2 U	1.8 U
alpha-BHC	9.9 U	1.9 U	20 U	2 U	1.8 U	5.2 U	1.8 U	2 U	2 U	1.9 U	1.9 U	2.2 U	1.8 U
alpha-Chlordane	33	0.87 J	45	2.7	1.8 U	5.2 U	1.8 U	2 U	2 U	1.9 U	1.9 U	2.2 U	110 DJ
Aroclor-1016	190 U	37 U	390 U	39 U	35 U	100 U	35 U	39 U	38 U	37 U	37 U	42 U	35 U
Aroctor-1221	390 U	74 U	790 U	79 U	72 U	210 U	71 U	80 U	77 U	76 U	76 U	85 U	72 U
Aroclor-1232	190 U	37 U	390 U	39 U	35 U	100 U	35 U	39 U	38 Ü	37 U	37 U	42 U	35 U
Aroclor-1242	190 U	37 U	390 U	39 U 39 U	35 U	100 U	35 U	39 U 39 U	38 U 38 U	37 U	37 U	42 U	35 U
Aroclor-1248	190 U	37 U	390 U		35 U	100 U	35 U	39 U	38 U	37 U 37 U	37 U	42 U	35 U
Aroclor-1254	190 U	37 U	390 U	39 U	35 U	100 U	35 U 35 U	39 U		37 U	37 U	42 U	35 U
Aroclor-1260	190 U	1	390 U	39 U 2 U	35 U 1.8 U	100 U 5.2 U		2 U	38 U		37 U	2.2 U	35 U
beta-BHC	9.9 U	1.9 U	20 U 20 U	2 U		5.2 U	1.8 U 1.8 U	2 U	2 U 2 U	1.9 U 1.9 U	1.9 U	2.2 U	1.8 U
delta-BHC	9.9 U 35	1.9 U 2.2 J	20 U	3.9 U	1.8 U 3.5 U	10 U	3.5 U	3.9 U	3.8 U	3.7 U	1.9 U	4.2 U	1.8 U
Dieldrin	9.9 U	1.9 U	28 J 20 U	3.9 U	3.5 U	5.2 U	1.8 U	3.9 U	3.6 U	1.9 U	3.7 U 1.9 U	2.2 U	1.8 U
Endosulfan I	9.9 U	3.7 U	39 U	3.9 U	1.8 U 3.5 U	10 U	3.5 U	3.9 U	3.8 U	3.7 U	3.7 U	4.2 U	1.8 U 3.5 U
Endosulfan II	19 U	3.7 U	39 U	3.9 U	3.5 U	10 U	3.5 U	3.9 U	3.8 U	3.7 U	3.7 U	4.2 U	3.5 U
Endosulfan sulfate	19 U	3.7 U	39 U	3.9 U	3.5 U	10 U	3.5 U	3.9 U	3.8 U	3.7 U	3.7 U	4.2 U	3.5 U
Endrin	1910	3.710	3910	3.9 0	3.5 0	10 0	ა.ა U	၁.ဗ၂ပ	3.0 U	3.710	3.710	4.2 0	3.5 U

## Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Control   Cont	302201 17B02301 415007 G7678016 Apr-95 26-May-95 4.2 U 3.5 U 2.2 U 1.8 U 2.2 U 120 DJ 2.2 U 7.8 2.2 U 1.8 U 2.2 U 1.8 U 2.6 U 1.8 U
Lab ID         G7678013         G7678010         G7678015         G7678014         G7415006         G7415004         G7427007         G7427008         G7415003         G7415002         G745002         G745002         G745003         G7415002         G745002	Apr-95 26-May-95 4.2 U 3.5 U 4.2 U 3.5 U 2.2 U 1.8 U 2.2 U 120 DJ 2.2 U 7.8 2.2 U 1.8 U 2.2 U 1.8 U 2.2 U 1.8 U 2.2 U 1.8 U 2.2 U 18 U 2.3 U 180 U
Sampling Date         26-May-95         26-May-95         26-May-95         26-May-95         25-Apr-95         25-Apr-95         26-Apr-95         26-Apr-95         26-Apr-95         26-Apr-95         26-Apr-95         26-Apr-95         26-Apr-95         26-Apr-95         25-Apr-95	4.2 U   3.5 U   4.2 U   3.5 U   2.2 U   1.8 U   2.2 U   7.8   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   1.8 U   2.2 U   2.2 U   2.2 U   3.3 U   3.3 U   3.3 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U   3.5 U
Endrin aldehyde 19 U 3.7 U 39 U 3.9 U 3.5 U 10 U 3.5 U 3.9 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U	4.2 U 3.5 U 2.2 U 1.8 U 2.2 U 120 DJ 2.2 U 7.8 2.2 U 1.8 U 2.2 U 1.8 U 2.2 U 1.8 U 2.2 U 18 U 2.2 U 180 U
Endrin ketone 19 U 3.7 U 39 U 3.9 U 3.9 U 3.5 U 10 U 3.5 U 3.9 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.8 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.8 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3.7 U 3	2.2 U 1.8 U 2.2 U 120 DJ 2.2 U 7.8 2.2 U 1.8 U 22 U 18 U 220 U 180 U
gamma-BHC (Lindane)         9.9 U         1.9 U         20 U         2 U         1.8 U         5.2 U         1.8 U         2 U         2 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.8 U         5.2 U         1.8 U         2 U         2 U         1.9 U         1.9 U         1.9 U         1.9 U         2.8 U         1.8 U         5.2 U         1.8 U         2 U         2 U         1.9 U         1.9 U         1.9 U         1.9 U         2.0 U         1.8 U         5.2 U         1.8 U         2 U         2 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9 U         1.9	2.2 U 120 DJ 2.2 U 7.8 2.2 U 1.8 U 22 U 18 U 220 U 180 U
gamma-Chlordane 69 1.4 J 50 NJ 2.8 1.8 U 5.2 U 1.8 U 2 U 2 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U 1.9 U	2.2 U 7.8 2.2 U 1.8 U 22 U 18 U 220 U 180 U
Heptachlor epoxide	2.2 U 1.8 U 22 U 18 U 220 U 180 U 310 J 2280
Methoxychlor         99 U         19 U         200 U         20 U         18 U         52 U         18 U         20 U         20 U         19 U         19 U         19 U         19 U         200 U         200 U         18 U         52 U         18 U         20 U         200 U         190 U         190 U         190 U         200 U         200 U         180 U         520 U         180 U         200 U         200 U         190 U         190 U         190 U         200 U         200 U         190 U         190 U         190 U         200 U         200 U         190 U         190 U         190 U         200 U         200 U         200 U         200 U         190 U         190 U         190 U         190 U         200 U         200 U         190 U         190 U         190 U         200 U         200 U         200 U         200 U         200 U         200 U         190 U         190 U         200 U         200 U         200 U         190 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U         200 U <td>22 U 18 U 220 U 180 U 1310 J 2280</td>	22 U 18 U 220 U 180 U 1310 J 2280
Methoxychlor         99 U         19 U         200 U         20 U         18 U         52 U         18 U         20 U         20 U         19 U         19 U         19 U         19 U         200 U         180 U         52 U         18 U         20 U         20 U         19 U         19 U         19 U         19 U         19 U         19 U         19 U         20 U         20 U         180 U         520 U         180 U         200 U         180 U         200 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         200 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U         190 U	220 U 180 U
Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg         Inorganics, mg/kg	1310 J 2280
Aluminum         849         367         2160         1870         5400 J         2140 J         538         6840         10500 J         4620 J         3000 J         13           Antimony         6.9 U         6.7 U         6.9 U         6.9 U         6.4 U         7.1 U         6.3 U         7.2 U         6.8 U         6.6 U         6.4 U	
Autimony 6.9 U 6.7 U 6.9 U 6.4 U 7.1 U 6.3 U 7.2 U 6.8 U 6.6 U 6.4 U	
[Ailtition]	7.6 U   6.3 U
1	
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1.2 B   1.1 B   3.5 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0 B   3.0	3.6 BJ 6.6 B
IDEIVINITI	0.03 B 0.02 B
Cadmium 0.720 0.750 0.750 0.750 0.750 0.750	0.8 U 0.66 U
Calcium 100 1010 1010 1000 1000 1000 1000 100	69.9 BJ 21400
Citionium	1.5 BJ 5.1
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Copper 1.0 b 6.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.60 b 5.6	0.46 U 6.1
1101 200 100 031 1100 0120 0015	46.2 J 497
Lead 0.99 0.93 0.75 1.70 0.0 2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.6 23.6 J
Imagnesium 50.7 b 20.5 b 600 b 62.5 b 60.5 b 60.5 b	12.6 BJ 190 B
Imaligatiese 0.09 B 0.01 B 11.2 1.0 B 2.1 B 0.00 B	0.44 BJ 7.4
Invertery 0.00 0 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5 0.00 5	0.04 B 0.03 B
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Polassium 103 U 33.7 U 104 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 105 U 1	114 U 95 U
Selenium 0.35 0 0.31 0 0.34 0 0.1 B 0.10 0 0.00 0	0.59 UJ 0.49 U
Oliver	0.67 U 0.56 U
Sodium	4.3 U 9.8 B
Triallum 0.42 0 0.44 0 0.42 0 0.44 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0 0.45 0	0.47 U 0.39 U
Variadium 1.0 1.1 b 3.0 0.0 2.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.1 c 1.	0.64 U 3.7 B
Zinc 0.79 B 0.00 B 40.9 0.77 B 40 0.70 M 5 0.79 M	0.28 UJ 11.1
General Chemistry, mg/kg	00.5
Total Petroleum Hydrocarbons 18.3 15.2 34.3 10 23.3 19.2 4.2 U 4.8 U 9.7 24.5 8.3 3	36.5 110

### Appendix C Table C-1 Summary of Soil Analytical Results Study Area 17

	i										
Sample ID		17B02302	17B02401	17B02402	17B02501	17B02502	17B03401	17B03501	17B03601	17B05601	17B06601
Lab ID	L	G7678018	G7678019	G7678020	G7679001	G7679002	G7679003	G7679004	G7679005	A8D170144001	
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	16-Apr-98	16-Apr-98
/olatile organics, µg/kg							ļ.,				ļ
,1,1-Trichloroethane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
,1,2,2-Tetrachloroethane	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
,1,2-Trichloroethane	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
,1-Dichloroethane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
,1-Dichloroethene	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
,2-Dichloroethane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
,2-Dichloroethene (total)	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
,2-Dichloropropane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
2-Butanone	11 U	12 U	11 U	5 J	11 U	11 U	11 U	13 U	11 U	23 U	23 U
2-Hexanone	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	23 U	23 U
4-Methyl-2-pentanone	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	23 U	23 U
Acetone	11 U	17	11 U	53	9 J	11 U	11 U	13 J	8 J	23 U	23 U
Benzene	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
Bromodichloromethane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
3romoform Stromoform S	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Bromomethane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	11 U	11 U
Carbon disulfide	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
Carbon tetrachloride	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
Chlorobenzene	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Chloroethane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	11 U	11 U
Chloroform	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
Chloromethane	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	11 U	11 U
cis-1,3-Dichloropropene	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Dibromochloromethane	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Ethylbenzene	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Methylene chloride	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
Styrene	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Tetrachloroethene	11 U	12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	5.7 U	5.7 U
Toluene	11 U	12 U	11 U	12 U	11 U	2 J	11 U	13 U	11 U	5.7 U	5.7 U
rans-1,3-Dichloropropene	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Trichloroethene	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Vinyl chloride	11 U	. 12 U	11 U	12 U	11 U	11 U	11 U	13 U	11 U	11 U	11 U
(ylene (total)	11 U	12 U	11 U	12 U	11 U	11 UJ	11 U	13 U	11 U	5.7 U	5.7 U
Semivolatile organics, µg/kg											
1,2,4-Trichlorobenzene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
1,2-Dichlorobenzene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
1.3-Dichlorobenzene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
1,4-Dichlorobenzene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
2,2'-oxybis(1-Chloropropane)	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA

### Appendix C Table C-1 Summary of Soil Analytical Results Study Area 17

			<del>,</del>	<del>,</del>		<del> </del>					
Sample ID	17B02301D	17802302	17B02401	17B02402	17B02501	17B02502	17B03401	17B03501	17B03601	17805601	17B06601
Lab ID	G7678017	G7678018	G7678019	G7678020	G7679001	G7679002	G7679003	G7679004	G7679005	A8D170144001	A8D170144002
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	16-Apr-98	16-Apr-98
2,4,5-Trichlorophenol	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA NA
2,4,6-Trichlorophenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
2,4-Dichlorophenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
2,4-Dimethylphenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
2,4-Dinitrophenol	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA
2,4-Dinitrotoluene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA NA	NA
2,6-Dinitrotoluene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA NA	NA
2-Chloronaphthalene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
2-Chlorophenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
2-Methylnaphthalene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	140 J	350 U	NA	NA
2-Methylphenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
2-Nitroaniline	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA
2-Nitrophenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
3,3'-Dichlorobenzidine	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
3-Nitroaniline	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA
4,6-Dinitro-2-methylphenol	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA
4-Bromophenyl-phenylether	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
4-Chloro-3-methylphenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
4-Chloroaniline	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
4-Chlorophenyl-phenylether	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA NA	NA
4-Methylphenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
4-Nitroaniline	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA
4-Nitrophenol	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA
Acenaphthene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	1500	350 U	NA	NA
Acenaphthylene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Anthracene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	2600	90 J	NA	NA
Benzo(a)anthracene	360 U	390 U	370 U	390 U	380 U	170 J	360 U	9000 D	340 J	NA	NA
Benzo(a)pyrene	360 U	390 U	370 U	390 U	380 U	170 J	360 U	8100 D	300 J	NA	NA
Benzo(b)fluoranthene	360 U	390 U	370 U	390 U	380 U	220 J	360 U	7200 D	320 J	NA	NA
Benzo(g,h,i)perylene	360 U	390 U	370 U	390 U	380 U	130 J	360 U	6400 D	220 J	NA .	NA
Benzo(k)fluoranthene	360 U	390 U	370 U	390 U	380 U	130 J	360 U	2400	250 J	NA	NA
bis(2-Chloroethoxy)methane	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
bis(2-Chloroethyl)ether	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
bis(2-Ethylhexyl)phthalate	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Butylbenzylphthalate	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	460	NA	NA
Carbazole	360 U	390 U	370 U	390 U	380 U	370 U	360 U	1700	350 U	NA	NA
Chrysene	360 U	390 U	370 U	390 U	380 U	190 J	360 U	9300 D	380	NA NA	NA
Di-n-butylphthalate	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Di-n-octylphthalate	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA NA	NA
Dibenz(a,h)anthracene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	2500	98 J	NA NA	NA

### Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

	17B02301D	17B02302	17B02401	17B02402	17B02501	17B02502	17B03401.	17B03501	17B03601	17B05601	17B06601
Lab ID	G7678017	G7678018	G7678019	G7678020	G7679001	G7679002	G7679003	G7679004	G7679005	A8D170144001	
Sampling Date		26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	16-Арг-98	16-Apr-98
Dibenzofuran	360 U	390 U	370 U	390 U	380 U	370 U	360 U	630	350 U	NA	NA
Diethylphthalate	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Dimethylphthalate	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Fluoranthene	360 U	390 U	370 U	390 U	380 U	310 J	360 U	13000 D	710	NA	NA
Fluorene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	1400	350 U	NA NA	NA
Hexachlorobenzene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Hexachlorobutadiene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Hexachlorocyclopentadiene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Hexachloroethane	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA NA	NA
Indeno(1,2,3-cd)pyrene	360 U	390 U	370 U	390 U	380 U	110 J	360 U	5900 D	170 J	NA	NA
Isophorone	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
N-Nitroso-di-n-propylamin <del>e</del>	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
N-Nitrosodiphenylamine (1)	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Naphthalene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	210 J	350 U	NA	NA
Nitrobenzene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Pentachlorophenol	900 U	970 U	920 U	980 U	950 U	920 U	900 U	1100 U	880 U	NA	NA
Phenanthrene	360 U	390 U	370 U	390 U	380 U	370 U	360 U	11000 D	440	NA	NA
Phenol	360 U	390 U	370 U	390 U	380 U	370 U	360 U	440 U	350 U	NA	NA
Pyrene	360 U	390 U	370 U	390 U	380 U	250 J	360 U	16000 D	640	NA	NA
Pesticides/PCBs, µg/kg										]	
4,4'-DDD	3.5 U	3.8 U	3.7 U	3.8 U	3.7 U	19 U	3.7 U	2600 C	8.4	NA NA	NA
4,4'-DDE	7.9 J	3.8 U	6.5 J	3.8 U	3.7 U	10 J	3.7 U	430	5.8 J	NA NA	NA
4,4'-DDT	7 U	3.8 U	12 J	3.8 U	3.7 U	21 J	3.7 U	1700 C	13	NA	NA
Aldrin	1.8 U	2 U	1.9 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA	NA
alpha-BHC	1.8 U	2 U	1.9 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA NA	NA
alpha-Chlordane	95 D	6.8	7.1	2 U	1.9 U	12 P	1.9 U	260	3.6 J	NA	NA
Aroclor-1016	35 U	38 U	37 U	38 U	37 U	190 U	37 U	2200 U	73 U	NA	NA
Aroclor-1221	72 U	77 U	75 U	78 U	76 U	380 U	74 U	4500 U	150 U	NA	NA
Aroclor-1232	35 U	38 U	37 U	38 U	37 U	190 U	37 U	2200 U	73 U	NA	NA
Aroclor-1242	35 U	38 U	37 U	38 U	37 U	190 U	37 U	2200 U	73 U	NA	NA
Aroclor-1248	35 U	38 U	37 U	38 U	37 U	190 U	37 U	2200 U	73 U	NA	NA
Aroclor-1254	35 U	38 U	37 U	38 U	37 U	190 U	37 U	2200 U	73 U	NA	NA
Aroclor-1260	35 U	38 U	37 U	38 U	37 U	190 U	37 U	2200 U	73 U	NA	NA
beta-BHC	1.8 U	2 U	1.9 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA	NA
delta-BHC	1.8 U	2 U	1.9 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA	NA
Dieldrin	18	3.8 U	2.3 J	3.8 U	3.7 U	12 J	3.7 U	220 U	5.1 J	NA	NA
Endosulfan I	1.8 U	2 U	1.9 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA	NA
Endosulfan II	3.5 U	3.8 U	3.7 U	3.8 U	3.7 U	19 U	3.7 U	220 U	7.3 U	NA	NA
Endosulfan sulfate	3.5 U	3.8 U	3.7 U	3.8 U	3.7 U	19 U	3.7 U	220 U	7.3 U	NA NA	NA
Endrin	3.5 U	3.8 U	3.7 U	3.8 U	3.7 U	19 U	3.7 U	220 U	7.3 U	NA	NA

### Appendix C Table C-1. Summary of Soil Analytical Results Study Area 17

Sample ID	17B02301D	17B02302	17B02401	17B02402	17B02501	17B02502	17B03401	17B03501	17B03601	17B05601	17B06601
Lab ID	L	G7678018	G7678019	G7678020	G7679001	G7679002	G7679003	G7679004	G7679005	A8D170144001	
Sampling Date	· • • · · · · · • • • • • • • • •	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	26-May-95	16-Apr-98	16-Apr-98
Endrin aldehyde	3.5 U	3.8 U	3.7 U	3.8 U	3.7 U	19 U	3.7U	220 U	7.3 U	NA	NA NA
Endrin ketone	3.5 U	3.8 U	3.7 U	3.8 U	3.7 U	19 U	3.7 U	220 U	7.3 U	NA	NA
gamma-BHC (Lindane)	1.8 U	2 U	1.9 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA	NA
gamma-Chlordane	100 D	7	5.8 J	2 U	1.9 U	14	1.9 U	320	4.6	NA	NA
Heptachlor	8.9	2 U	1.9 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA	NA
Heptachlor epoxide	1.8 U	2 U	3.7 U	2 U	1.9 U	9.6 U	1.9 U	110 U	3.7 U	NA NA	NA
Methoxychlor	18 U	20 U	19 U	20 U	19 U	96 U	19 U	1100 U	37 U	NA	NA
Toxaphene	180 U	200 U	190 U	200 U	190 U	960 U	190 U	11000 U	370 U	NA ·	NA
Inorganics, mg/kg											
Aluminum	2460	2680	1040	5270	1550 J	1640 J	1200 J	1580 J	1980 J	NA	NA
Antimony	6.3 U	6.8 U	6.6 U	6.9 U	6.7 U	6.6 U	6.4 U	7.7 U	6.4 U	NA	NA
Arsenic	0.73 B	1.4 B	1.4 B	1 B	0.43 U	0.57 B	0.53 B	0.68 B	0.46 B	NA	NA
Barium	7.3 B	6.6 B	7.5 B	12 B	3.3 B	8 B	5.2 B	16.3 B	6.1 B	NA	NA
Beryllium	0.02 B	0.06 B	0.1 B	0.06 B	0.02 U	0.08 U	0.06 U	0.15 B	0.05 U	NA	NA
Cadmium	0.66 U	0.72 U	1.3	0.72 U	0.7 U	0.69 U	0.67 U	0.81 U	0.68 U	NA	NA
Calcium	19600	3380	235000	376 B	629 B	15100	3910	88200	5270	NA	NA
Chromium	6.2	2.7	7.7	4.7	1.8 B	2.1 B	1.6 B	22.7	2.8	NA	NA
Cobalt	0.62 U	0.67 U	0.93 B	0.77 B	0.65 U	0.65 U	0.63 U	0.76 U	0.63 U	· NA	NA
Соррег	5 B	1.6 B	9	0.41 B	0.5 U	2.7 U	1 U	7.9	2.1 U	NA	NA
Iron	477	314	632	817	236 J	710 J	332 J	10400 J	563 J	NA	NA
Lead	25.4 J	11.7 J	39.7 J	6.4 J	0.9 J	7.4 J	3.6 J	50.2 J	16.5 J	NA	NA NA
Magnesium	179 B	81.4 B	1700	23 B	51.4 B	210 B	96.6 B	1020 B	80.6 B	NA	NA
Manganese	8.4	2.4 B	18.8	4	1.1 B	5	5.5	47.7	2.6 B	NA .	NA NA
Mercury	0.03 B	0.03 U	0.07	0.03 B	0.03 U	0.03 U	0.02 U	0.08	0.03 B	NA	NA
Nickel	3 U	3.3 U	3.2 U	3.3 U	3.2 U	3.2 U	3.1 U	3.7 U	3.1 U	NA	NA
Potassium	95.1 U	102 U	98.9 U	103 U	99.9 U	98.8 U	96.1 U	116 U	96.6 U	NA	NA
Selenium	0.49 U	0.53 U	0.51 UJ	0.53 U	0.52 U	0.51 U	0.5 U	0.6 UJ	0.5 U	NA NA	NA
Silver	0.56 U	0.6 U	0.58 U	0.6 U	0.59 U	0.58 U	0.56 U	0.68 U	0.57 U	NA	NA
Sodium	10.2 B	7.5 B	75 B	5.9 B	15.5 U	15.1 U	8.2 U	47.7 B	11.6 U	NA	NA
Thallium	0.39 U	0.42 U	0.4 U	0.42 U	0.41 U	0.4 U	0.39 U	0.47 U	0.39 U	NA	NA
Vanadium	3.4 B	2.7 B	15.4	4.5 B	2.5 B	3.1 B	3.1 B	8.4 B	4.8 B	NA	NA
Zinc	15.4	2.6 B	20.1	0.71 B	0.89 B	5.2	2.7 B	32.7	6.2	NA	NA
General Chemistry, mg/kg											
Total Petroleum Hydrocarbons	95.3	26.6	28.3	4.6 U	28.5	39.6	57.8	98.5	9.4	NA	NA

### **TABLE C-2**

SUMMARY OF SUBSURFACE SOIL ANALYTICAL RESULTS, PAH CONFIRMATION SAMPLES

### Appendix C Table C-2. Summary of Soil Analytical Results, PAH Confirmation Samples Study Area 17

SampleID	17B04801	17B04901	17B04901D	17B05001	17B05101	17B05201	17B05301	17B05401	17S04801	17S04901
LabID	A7K260160007	A7K220128004	A7K220128005	A7K220128008	A7K260160005	A7K260160006	A7K250140002	A7K250138014	A7K220128001	A7K220128003
Sampling Date	11/25/97	11/21/97	11/21/97	11/21/97	11/25/97	11/25/97	11/24/97	11/24/97	11/21/97	11/21/97
1-Methylnaphthalene	38 U	38 U	38 U	38 U	39 U	39 U	41 U	200 U	350 U	37 U
2-Methylnaphthalene	38 U	38 U	38 U	38 U	39 U	39 U	41 U	200 U	350 U	37 U
Acenaphthene	38 U	38 U	38 U	42	39 U	39 U	41 U	200 U	350 U	38
Acenaphthylene	38 U	38 U	38 U	38 U	39 U	39 U	41 U	200 U	350 U	37 U
Anthracene	38 U	38 U	38 U	38 U	39 U	39 U	41 U	200 U	350 U	37 U
Benzo(a)anthracene	3.8 U	3.7 U	3.7 U	27	7.4 PF	3.8 U	12	32	35 U	3.8 PF
Benzo(a)pyrene	3.8 U	3.7 U	3.7 U	26	12	3.8 U	23	29	35 U	8.2
Benzo(b)fluoranthene	3.8 U	3.7 U	3.7 U	54	12	3.8 U	42	34	35 U	9.7
Benzo(ghi)perylene	3.8 U	3.7 U	3.7 U	56	7.8	3.8 U	44	43	35 U	11
Benzo(k)fluoranthene	2 U	1.9 U	1.9 U	13 PF	6.2	2 U	18	15	18 U	4.5
Chrysene	3.8 U	3.7 U	3 7 U	42	13	3.8 U	22	29	35 U	12
Dibenz(a,h)anthracene	3.8 U	3 7 U	3 _: 7 U	3.8 U	5.7	3.8 U	9.8 PF	19 U	35 U	3.7 U
Fluoranthene	3.8 U	3 7 U	3 7 U	64	3.8 U	3.8 U	22	35	35 U	17
Fluorene	38 U	38 U	38 U	38 U	39 U	39 U	41 U	200 U	350 U	37 U
Indeno(1,2,3-cd)pyrene	3.8 U	3.7 U	3.7 U	3.8 U	7.8	3.8 U	20 PF	19 U	35 U	3.7 U
Naphthalene	38 U	38 U	38 U	39	39 U	39 U	41 U	200 U	350 U	37 U
Phenanthrene	38 U	38 U	, 38 U	38 U	39 U	39 U	41 U	200 U	350 U	37 U
Pyrene	21	3.7 U	3.7 U	74	30	3.8 U	24	52	56	23

### Appendix C Table C-2. Summary of Soil Analytical Results, PAH Confirmation Samples Study Area 17

Naval Training Center, Orlando Orlando, FL

SampleID	17S05001	17S05001D	17S05101	17S05201	17S05301	17S05401	17S05501	17S05601	17805701	17805801	17S05901
LabiD	A7K220128006	A7K220128007	A7K220128009	A7K220128011	A7K250140001	A7K250138013					
Sampling Date	11/21/97	11/21/97	11/21/97	11/21/97	11/24/97	11/24/97	11/17/98	11/17/98	11/17/98	11/17/98	11/17/98
1-Methylnaphthalene	1800 U	1800 U	75000 U	370 U	90 U	190 U	100 U	1100 U	8200 U	110 U	1200 U
2-Methylnaphthalene	1800 U	1800 U	75000 U	370 U	90 U	190 U	100 U	1100 U	8200 U	. 110 U	1200 U
Acenaphthene	1800 U	3000	190000	1200	260	770	100 U	1100 U	8200 U	110 U	1200 U
Acenaphthylene	1800 U	1800 U	75000 U	370 U	90 U	190 U	100 U	1100 U	8200 U	110 U	1200 U
Anthracene	1800 U	1800 U	75000 U	370 U	90 U	190 U	100 U	1100 U	8200 U	110 U	1200 U
Benzo(a)anthracene	1700	980	57000	410	83	270	5.1 U	330	2200	14	210
Benzo(a)pyrene	1700	1100	48000	420	120	62 PF	5.1 U	430	2500	55	580
Benzo(b)fluoranthene	1700	1200	47000	500	140	270	5.1 U	430	2200	24	610
Benzo(ghi)perylene	1000	1000	24000	400	110	19 U	10 U	330	1600	36	610
Benzo(k)fluoranthene	820	510	21000	240	57	67 PF	1.7 U	220	1200	17	300
Chrysene	1600	930	50000	390	100	250	5.1 U	340	2100	16	240
Dibenz(a,h)anthracene	270 PF	180 U	7900 PF	54 PF	26 PF	57 PF	5.1 U	55 U	410 U	5.7 U	58 U
Fluoranthene	3700	2100	160000	900	210	530	10 U	780	6000	15	230
Fluorene	1800 U	1800 U	75000 U	370 U	90 U	190 U	100 U	1100 U	8200 U	110 U	1200 U
Indeno(1,2,3-cd)pyrene	280 PF	180 U	7400 U	360	58	35 PF	5.1 U	290	410 U	5.7 U	570
Naphthalene	1800 U	1800 U	75000 U	370 U	98	190 U	100 U	1100 U	ั 8200 U	110 U	1200 U
Phenanthrene	3300 PF	1800 U	120000	370 U	90 U	390	100 U	1100 U	8200 U	110 U	1200 U
Pyrene	3900	1800	100000	630	160	630	5.1 U	550	4300	17	370

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## Appendix C Table C-2. Summary of Soil Analytical Results, PAH Confirmation Samples Study Area 17

SampleID	17S06001	17S06101	17S06201	17S06301	17S06401	17S06401D	17S06501	17S06601
LabID								
Sampling Date	11/17/98	11/17/98	11/17/98	11/17/98	11/17/98	11/17/98	11/17/98	11/17/98
1-Methylnaphthalene	140 U	27000 U	11000 U	53000 U	21000 U	160000 U	1100 U	120 U
2-Methylnaphthalene	140 U	27000 U	11000 U	53000 U	21000 U	160000 U	1100 U	120 U
Acenaphthene	140 U	27000 U	11000 U	53000 U	21000 U	160000 U	1100 U	120 U
Acenaphthylene	140 U	27000 U	11000 U	53000 U	21000 U	160000 U	1100 U	120 U
Anthracene	140 U	27000 U	11000 U	53000 U	21000 U	160000 U	1100 U	120 U
Benzo(a)anthracene	7 U	10000	3000	16000	6700	34000	170	6 U
Benzo(a)pyrene	28	14000	4000	20000	6600	29000	240	13
Benzo(b)fluoranthene	17	12000	3700	20000	7400	32000	270	7.9
Benzo(ghi)perylene	15	8700	2700	13000	4100	18000	220	12 U
Benzo(k)fluoranthene	7.1	6100	1900	9500	3400	16000	140	4.5
Chrysene	8.3	11000	3100	17000	6700	33000	200	6 U
Dibenz(a,h)anthracene	7 U	1300 U	550 U	2700 U	1100 U	7900 U	55 U	6 U
Fluoranthene	14 U	27000	7400	46000	19000	100000	400	12 U
Fluorene	140 U	2700 U	11000 U	5300 U	21000 U	16000 U	1100 U	120 U
Indeno(1,2,3-cd)pyrene	7 U	7700	550 U	12000	4100	17000	55 U	6.9
Naphthalene	140 U	27000 U	11000 U	53000 U	21000 U	160000 U	1100 U	120 U
Phenanthrene	140 U	27000 U	11000 U	53000 U	21000 U	160000 U	1100 U	120 U
Pyrene	13	19000	5100	29000	12000	68000	280	6.9

#### TABLE C-3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

## Appendix C Table C-3.1. Summary of Groundwater Analytical Results, Initial Screening Study Area 17

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Sample ID	17G00101	17G00201	17G00301	17G00401	17G00501	17G00501D	17G02401
Lab ID	G7716001	G7716002	G7716003	G7716004	G7716005	G7716006	G7731005
Sampling Date	31-May-95	31-May-95	31-May-95	31-May-95	31-May-95	31-May-95	2-Jun-95
Volatile organics, µg/L							
1,1,1-Trichloroethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
1,1-Dichloroethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
1,1-Dichloroethene	1 U	1 U	1 U	3 J	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	1 UR	1 UR	1 UR	10 UR	1 UR	1 UR	1 U
1,2-Dibromoethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
1,2-Dichloroethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
1,2-Dichloropropane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
2-Butanone	5 UR	5 UR	5 UR	50 UR	5 UR	5 UR	5 UR
2-Hexanone	5 UJ	5 UJ	5 UJ	50 UJ	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone	5 U	5 U	5 U	50 U	5 U	5 U	5 U
Acetone	5 UR	4 UR	5 UR	50 UR	5 UR	5 UR	2 UR
Benzene	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Bromochloromethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Bromodichloromethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Bromoform	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Bromomethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Carbon disulfide	1 U	1 U	1 U	10 U	1	1 U	1 U
Carbon tetrachloride	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Chlorobenzene	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Chloroethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Chloroform	1 U	5	1 U	10 U	1 U	1 U	1 U
Chloromethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	1 U	1 U	1 U	200	1 U	1 U	1 U
cis-1,3-Dichloropropene	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Dibromochloromethane	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Ethylbenzene	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Methylene chloride	2 U	2 U	2 U	20 U	2 U	2 U	2 U
Styrene	1 U	1 U	1 U	10 U	1 U	1 U	1 U
Tetrachloroethene	0.4 J	1 U	1 U	10 U	1 U	1 U	1 U
Toluene	1 U	1 U	1 U	10 U	1 U	1 U	1 U

Appendix C

Table C-3.1. Summary of Groundwater Analytical Results, Initial Screening

Study Area 17

Sample ID	17G0010	1	17G0020	)1	17G003	01	17G0040	01	17G0050	)1	17G00501D	17G02401
Lab ID	G771600	1	G771600		G77160		G77160		G771600	5	G7716006	G7731005
Sampling Date	31-May-9		31-May-		31-May-		31-May-	95	31-May-9	95	31-May-95	2-Jun-95
rans-1,2-Dichloroethene	111	+	1			U	5		1	U	1 U	1 U
rans-1,3-Dichloropropene	110		1	Ü	1	u	10	Ü	1	Ū	1 U	1 U
Trichloroethene	11		l l	Ū	1	U	42		1	U	1 U	1 U
Vinyl chloride	ilì	- 1	1	Ū	1	U	190		1	U	1 U	1 U
Kylene (total)	1 (		1	Ū	1	Ü	10	U	1	U	1 U	1 U
Semivolatile organics, µg/L												
1,2,4-Trichlorobenzene	10 (	j	10	U	10	Ū	10	U	10	U	10 U	10 U
1.2-Dichlorobenzene		<u> </u>		Ū	1	υ	1	U	1	U	1 U	1 U
1,3-Dichlorobenzene		Ũ		U	1	U	1	U	1	U	1 U	1 U
1,4-Dichlorobenzene		U	1	Ü	1	U	1	U	1	U	1 U	1 U
2,2'-oxybis(1-Chloropropane)		U	10		10		10	U	10	U	10 U	10 U
2,4,5-Trichlorophenol	25		25		25	U	25		25	U	25 U	25 U
2,4,6-Trichlorophenol	10 1		10		10		10	U	10	U	10 U	10 U
2,4-Dichlorophenol		U	10		10		10	U	10	U	10 U	10 U
2,4-Dimethylphenol	10		10			U	10	U	10	U	10 U	10 U
2,4-Dinitrophenol	25			UJ	1	UJ	25		25	UJ	25 UJ	25 U
	10		10			U	10		10	U	10 U	10 U
2,4-Dinitrotoluene 2,6-Dinitrotoluene	10		10			Ū	10		10	U	10 U	10 L
	10		10			U	10		10	U	10 U	10 L
2-Chloronaphthalene 2-Chlorophenol	10		10	1		U	1	U	10	Ū	10 U	10 L
	10		10			U		U	10	U	10 U	10 L
2-Methylnaphthalene	10		10			Ū		U	10		10 U	10 L
2-Methylphenol 2-Nitroaniline	25		25			U		U	25	U	25 U	25 L
	10		10			Ū		U	10	U	10 U	10 L
2-Nitrophenol 3,3'-Dichlorobenzidine	10			Ū	1	Ū		U	10	U	10 U	10 L
	25		25			Ū	25	U	25	U	25 U	25 (
3-Nitroaniline	25			UJ		UJ		Ū		UJ	25 UJ	25 L
4,6-Dinitro-2-methylphenol	10			U		U	1	U	10		10 U	10 (
4-Bromophenyl-phenylether	10			U	10		1	Ú	10		10 U	10 (
4-Chloro-3-methylphenol	10			U	10			U	1	U	10 U	10 (
4-Chloroaniline	10			U	1	U		U	10		10 U	10 (
4-Chlorophenyl-phenylether	10			U		U		U		U	10 U	10 (
4-Methylphenol	25		1	U		5 U		U		Ū	25 U	25 (
4-Nitroaniline	25	U		U	1 - 25	, 0	1 2	-,-				

Appendix C
Table C-3.1. Summary of Groundwater Analytical Results, Initial Screening
Study Area 17

Sample ID	17G00101	17G00201	17G00301	17G00401	17G00501	17G00501D	17G02401
Lab ID	G7716001	G7716002	G7716003	G7716004	G7716005	G7716006	G7731005
Sampling Date	31-May-95	31-May-95	31-May-95	31-May-95	31-May-95	31-May-95	2-Jun-95
4-Nitrophenol	25 UJ	25 UJ	25 UJ	25 U	25 UJ	25 UJ	25 U
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	10 U	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	1 U	1 U	1 U	1	1 U	1	1
Butylbenzylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dimethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine (1)	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U

## Appendix C Table C-3.1 Summary of Groundwater Analytical Results, Initial Screening Study Area 17

<b>_</b>									j'''		· · · · · · · · · · · · · · · · · · ·	_		
Sample ID	17G00101	1   1	17G002	01	17G0030	01	17G004	01	17G005	01	17G0050	1D	17G024	01
Lab ID	G7716001	1 (	<b>377160</b>	02	G77160	)3	G77160	04	G77160	05	G77160	06	G77310	05
Sampling Date	31-May-95	5 3	1-May-	95	31-May-	95	31-May-	95	31-May-		31-May-		2-Jun-9	
Pentachlorophenol	1 U	J	1	U	1		1	U		U		U		U
Phenanthrene	10 U	J T	10	U	10		10	U	10		10		10	
Phenol	10 U	j	10		10		10		10		10			U
Pyrene	10 U	J	10	U	10	U	10	Ű	10	S	10	U	10	U
Pesticides/PCBs, µg/L														L
4,4'-DDD	0.1 U	)	0.1	U	0.1		0.1	1	0.1		0.1			IJ
4,4'-DDE	0.1 U	J T	0.1		0.1	-	0.1		0.1		0.1			UJ
4,4'-DDT	0.1 L	1	0.1	I	0.1		0.1	-	0.1		0.1	-		UJ
Aldrin	0.05 L		0.05		0.05		0.05		0.05		0.05		0.05	
alpha-BHC	0.05 L		0.05		0.05		0.05		0.05		0.05		0.05	
alpha-Chlordane	0.05 L	1 _	0.05		0.05		0.05		0.05		0.05		0.05	
Aroclor-1016	0.5 L			1	0.5		0.5	1	0.5		0.5			UJ
Aroclor-1221	0.5		0.5		0.5		0.5		0.5		0.5			UJ
Aroclor-1232	0.5 L				0.5		0.5		0.5		0.5			UJ
Aroclor-1242	0.5 L		0.5		0.5		0.5		0.5	l	0.5			UJ
Aroclor-1248	0.5		0.5		0.5		0.5		0.5		0.5		1	UJ
Aroclor-1254	0.5		0.5		0.5		0.5	l	0.5		0.5			UJ
Aroclor-1260	0.5 L	1	0.5		0.5		0.5		0.5	1	0.5	1." .	1	UJ
beta-BHC	0.05 L		0.05		0.05		0.05	1	0.05		0.05	L	0.05	
delta-BHC	0.05 L		0.05		0.05		0.05		0.05		0.05		0.05	
Dieldrin	0.1 L		0.1	1	0.1	_	0.1	1	0.1		0.1	_	0.1	
Endosulfan I	0.05		0.05		0.05		0.05		0.05		0.05	L	0.05	1
Endosulfan II	0.1 L	- 1	0.1	I	0.1	-	0.1	1	0.1	1	0.1		0.1	
Endosulfan sulfate	0.1 L		0.1		0.1		0.1	L	0.1	UJ	0.1		0.1	
Endrin	0.1 L	1	0.1		0.1	_	l	_	0.1	UJ	0.1	L	0.1	1
Endrin aldehyde	0.1		0.1		0.1		0.1		0.1	บป	0.1		0.1	
Endrin ketone	0.1 L		0.1		0.1		0.1	1	0.1		0.1	_	0.1	
gamma-BHC (Lindane)	0.05 L		0.05	I	0.05		0.05	<b></b>	0.05		0.05	l	0.05	1
gamma-Chlordane	0.05 L		0.05		0.05		0.05	1	0.05		0.05	3 -	0.05	
Heptachlor	0.05 L		0.05		0.05		0.05	L	0.05	1	0.05		0.05	
Heptachlor epoxide	0.05 L		0.05		0.05		0.05	1	0.05		0.05		0.05	1
Methoxychlor	0.5 L		0.5	I	0.5		0.5		0.5		0.5	I	1	UJ
Toxaphene	5 L	J	5	U	5	U	5	U	5	IJ	5	U	5	UJ

Appendix C
Table C-3.1. Summary of Groundwater Analytical Results, Initial Screening
Study Area 17

Sample ID	17G0010	01	17G00201		17G0030	)1	17G004	01	17G005	01	17G0050		17G024	
Lab ID	G77160	01	G7716002	!	G771600	)3	G77160	04	G77160	05	G77160	06	G77310	05
Sampling Date	31-May-	95	31-May-95	5	31-May-9	95	31-May-	95	31-May-	95	31-May-	95	2-Jun-9	95
Inorganics, µg/L														
Aluminum	910		4800		6650		1050		473		1340		551	1
Antimony	2.7	j	2.5 U	i T	2.5	U	2.5	U	2.5	U	2.5	J	2.5	
Arsenic	1.9	υj	1.9 U	j	1.9	ŪĴ	2.1	J	2.7	J	2.4	J	1.9	UJ
Barium	66.9	J	40.9 J		53.2	J	41.2	J	33.2	J	34.4	J	115	1
Beryllium	0.12	j	0.15 J		0.17	J	0.1	UJ	0.1	IJ	0.1	UJ		IJ
Cadmium	3.5	U	3.1 U	ī	3.1	U	3.1	U	3.1	U	3.1	U	3.5	U
Calcium	136000		67600		17800		36400		34700		34000		44700	
Chromium	3.1	υ	3.1 U		6.1	В	3.1	U	3.1	U	3.1	U	5.2	
Cobalt	29	UJ	2 9 U	IJ	2.9	UJ	2.9	ÚJ	2.9	IJ	2.9	UJ		UJ
Copper	3 2	υ	4.4 U	,	1.7	Ü	1.4	U	23.8	В	2.2	U	2.7	1
Iron	108		1310	.	14800		6760		7650		6460		100000	
Lead	1.5	UJ	2.4 B	1	3.4		1.5	U	1.5	U	1.5	U	1.5	
Magnesium	14700		7240		5470		10400		6130		5670		3730	
Manganese	10.5	В	21		28.3		38.5		20.2		18.9	Ī	265	I
Mercury	0.12	Ų	0.12 U	,	0.12	U	0.12	U	0.12		0.12	U	0.12	
Nickel	14.2	U	14.2 U	,	14.2	U	14.2	U	14.2	U	14.2	1	25.6	
Potassium	15100	U	1460 J		747	J	1690	J	2090	J	2140	J	3330	
Selenium	2.3	UJ	2.3 U	IJ	2.3	J	2.3	U	2.3	U	2.3	_	2.3	
Silver	2.6	U	2.6 U	,	2.6	U	2.6	U	2.6	U	2.6	·	2.6	
Sodium	16100		7960		3670	В	9690		7090		6790		4660	
Thallium	1.8	U	4.8 J		1.8	UJ	1.8	U	1.8	L	1.8	, -		UJ
Vanadium	81.5		19.7 B	3	12.6	В	5.9	В	6.4	1	7.6		4.4	
Zinc	2.1	В	3.9 B	3	2.5	В	3.8	В	5.1	В	2.5	В	226	1
General Chemistry, mg/L														
Total Petroleum Hydrocarbons	1	U	1 U	,	1	U.	1	U	1	U	1	U	1	U
Total Suspended Solids	5		3		90		3		1	U	3		76	3

Sample ID	17G00403	17G00601	17G00701	17G00801	17G00901	17G01001	17G01001D
Lab ID	C7B130145008	C7B130145003	C7B130145005	C7B130145004	C7B130145009	C7B130145006	C7B130145007
Sampling Date	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97
Volatile organics, µg/L							
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	16	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichlorobenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,3-Trichloropropane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trimethylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3,5-Trimethylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichloropropane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
I,4-Dichlorobenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
2,2-Dichloropropane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
I-Chlorotoluene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromobenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	" 0.5 U
Bromomethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U

Sample ID	17G00403	17G00601	17G00701	17G00801	17G00901	17G01001	17G01001D
Lab ID	C7B130145008	C7B130145003		C7B130145004	C7B130145009	C7B130145006	C7B130145007
Sampling Date	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97	12-Feb-97
Chlorobenzene	0.5 iU	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorodibromomethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	1 U	1 U
Chloromethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	460 D	11	7.2	40	3.6	3.4	3.2
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromomethane	0 5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane	0 5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Hexachlorobutadiene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U .	0.5 U
Isopropylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Butylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
n-Propylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
p-Isopropyltoluene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
sec-Butylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	0.5 U	0.5 U	1.1 U	1.1 U	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	6.9	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	120 D	0.5 U	0.84 U	0.5 U	0.5 U	2.3	2.2
Trichlorofluoromethane	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	450 D	15	67	2.9	2.6	1.4	1.6
Xylenes (total)	0.5 U	0.5 U	0.84 U	0.5 U	0.5 U	0.5 U	0.5 U

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Sample ID	17G00202	17G00302	17G00404	17G00502	17G01003	17G01101	17G01201	17G01301	17G01401	17G01501
Lab ID	A8F180155007	A8F120181005	A8F200131002	A8F100162005	A8F200131003	A8F100162004	A8F100162006	A8F120181006	A8F120181007	A8F100162001
Sampling Date	16-Jun-98	10-Jun-98	19-Jun-98	8-Jun-98	19-Jun-98	8-Jun-98	8-Jun-98	10-Jun-98	10-Jun-98	9-Jun-98
Volatile organics, μg/L										
1,1,1,2-Tetrachloroethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	5 U	5 U	26	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloropropene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	10 U	10 U	33 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (EDB)	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3,5-Trimethylbenzene	5 U	5 U	17 U	5 U	5 U	5 Ü	5 U	5 U	5 U	5 U
1,3-Dichloropropane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,2-Dichloropropane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorotoluene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Chlorotoluene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromobenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	10 U	10 U	33 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	10 U	10 U	33 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	5 U	5 U	17 U	0.69 J	5 U	5 U	5 U	. 5 U	5 U	5 U
Chloromethane	10 U	10 U	33 U	1.2 J	10 U	10 Ü	10 U	10 U	10 U	10 U

Sample ID	17G00202	17G00302	17G00404	17G00502	17G01003	17G01101	17G01201	17G01301	17G01401	17G01501
Lab ID	A8F180155007	A8F120181005	A8F200131002	A8F100162005	A8F200131003	A8F100162004	A8F100162006	A8F120181006	A8F120181007	A8F100162001
Sampling Date	16-Jun-98	10-Jun-98	19-Jun-98	8-Jun-98	19-Jun-98	8-Jun-98	8-Jun-98	10-Jun-98	10-Jun-98	9-Jun-98
									1	
Volatile organics, µg/L	2.5 U	2.5 U	420	2.5 U	30	2.5 U				
cis-1,2-Dichloroethene	2.5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane		10 U	33 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane	10 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	5 U		17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	5 U	5 U	17 U	0.67 J	5 U	5 U	5 U	5 U	5 U	5 U
m-Dichlorobenzene	5 U	5 U		2.5 U						
m-Xylene & p-Xylene	2.5 U	2.5 U	8.3 U		5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Butylbenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
n-Propylbenzene	5 U	5 U	17 U	5 U		5 U	5 U	5 0	5 U	5 U
Naphthalene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
o-Dichlorobenzene	5 U	5 U	17 U	5 U	5 U		2.5 U	2.5 U	2.5 U	2.5 U
o-Xylene	2.5 U	2.5 U	8.3 U	2.5 U	2.5 U	2.5 U	2.5 U	5 U	5 U	5 U
p-Dichlorobenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
p-Isopropyltoluene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 0
sec-Butylbenzene	5 U	5 U	17 U	5 U	5 U	5 U		5 U	5 U	5 0
Styrene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
tert-Butylbenzene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	5 U	5 U	17 U	5 U	5 U	5 U	5 U		2.5 U	2.5 U
trans-1,2-Dichloroethene	2.5 U	2.5 U	4.1 J	2.5 U						
trans-1,3-Dichloropropene	5 U	5 U	17 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	5 U	5 U	260	5 U	6.9	5 U	5 U	5 U	1	10 U
Trichlorofluoromethane	10 U	10 U	33 U	10 U	10 U	10 U	10 U	10 U	10 U	1
Vinyl chloride	10 U	10 U	350	10 U	10	10 U				

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Sample ID	17G01601	17G01701	17G01801	17G01901	17G02001	17G02101	17G02201	17G02301	17G02301D	17G02401
Lab ID	A8F100162002	A8F100162003	A8F120181003	A8F120181002	A8F120181004	A8F180155006	A8F180155005	A8F200131008	A8F200131007	A8F200131006
Sampling Date	9-Jun-98	9-Jun-98	11-Jun-98	11-Jun-98	11-Jun-98	16-Jun-98	16-Jun-98	18-Jun-98	18-Jun-98	18-Jun-98
Volatile organics, µg/L										
1,1,1,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,1,1-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,1,2-Trichloroethane	· 5 U	5 U	5 U	5 U	5 U	5 U	5 Ú	5 U	5 U	2500 U
1,1-Dichloroethane	5 U	5 U	5 U	5 U	3.4 J	5 U	5 U	5 U	5 U	2500 U
1,1-Dichloroethene	5 U	5 U	5 U	5 U	1 J	5 U	5 U	5 U	5 U	2500 U
1,1-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,2,3-Trichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,2,3-Trichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,2,4-Trichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,2,4-Trimethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,2-Dibromo-3-chloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5000 U
1,2-Dibromoethane (EDB)	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,3,5-Trimethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
1,3-Dichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
2,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
2-Chlorotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
4-Chlorotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Benzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Bromobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Bromochloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Bromoform	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5000 U
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Chlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 Ü	5 U	5 U	2500 U
Chlorodibromomethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5000 U
Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	0.89 J	5 U	5 U	2500 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	1.6 J	10 U	10 U	5000 U

Naval Training Center Orlando, FL

			47004004	47004004	47000004	17G02101	17G02201	17G02301	17G02301D	17G02401
Sample ID	17G01601	17G01701	17G01801	17G01901	17G02001 A8F120181004	A8F180155006	A8F180155005	A8F200131008	A8F200131007	A8F200131006
Lab ID	A8F100162002	A8F100162003	A8F120181003	A8F120181002				18-Jun-98	18-Jun-98	18-Jun-98
Sampling Date	9-Jun-98	9-Jun-98	11-Jun-98	11-Jun-98	11-Jun-98	16-Jun-98	16-Jun-98	10-3011-90	10-3011-90	10-3411-90
Volatile organics, µg/L										1200 U
cis-1,2-Dichloroethene	2.5\U	2.5 U	2.5 U	2.5 U	98	2.5 U	1.7 J	8.8	9.9	2500 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Dibromomethane	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 0	5 U	5000 U
Dichlorodifluoromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2500 U
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 0	2500 U
Hexachlorobutadiene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Isopropylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U			
m-Dichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U 1200 U
m-Xylene & p-Xylene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2500 U				
Methylene chloride	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
n-Butylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		2500 U
n-Propylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Naphthalene	5 U	5 U	5 U_	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
o-Dichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1200 U
o-Xylene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2500 U				
p-Dichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		
p-Isopropyltoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U 2500 U
sec-Butylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		
Styrene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U 2500 U
tert-Butylbenzene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2500 U
Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U		2500 U
Toluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U 2.5 U	1200 U
trans-1,2-Dichloroethene	2.5 U	2.5 U	2.5 U	2.5 U	0.76 J	2.5 U	2.5 U	2.5 U		2500 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Trichloroethene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	20	25	65000
Trichlorofluoromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5000 U
Vinyl chloride	10 U	10 U	10 U	10 U	140	10 U	10 U	10 U	10 U	5000 U

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Sample ID	17G02401D	17G02501	17G02601	17G02701	17G02801	17G02901	17G03001	17G03101	17G03201	17G03301
Lab ID	A8F200131005	A8F200131004	A8F180155002	A8F180155003	A8F180155004	A8F240177002	A8F240177005	A8F240177006	A8F240177007	A8F240177008
Sampling Date	18-Jun-98	18-Jun-98	17-Jun-98	17-Jun-98	17-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
Volatile organics, µg/L										
1,1,1,2-Tetrachloroethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,1,1-Trichloroethane	2500 U	5 U	5 U	10 U	5 U	5 Ú	5 U	10 U	5 U	5 U
1,1,2,2-Tetrachloroethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,1,2-Trichloroethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,1-Dichloroethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,1-Dichloroethene	2500 U	5 ่ับ	์ 5 ับ	6.1 J	5 U	5 U	5 U	10 U	5 U	5 U
1,1-Dichloropropene	2500 U	5 U	5 U	์ 10 U	5 U	5 U	5 U	. 10 U	5 U	5 U
1,2,3-Trichlorobenzene	2500 U	, 5 <b>'</b> υ '	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,2,3-Trichloropropane	2500 U	5 U	໌ 5 ບໍ່	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,2,4-Trichlorobenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,2,4-Trimethylbenzene	2500 U	່ 5 ^¹ ປ ີ	5 ับ	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,2-Dibromo-3-chloropropane	5000 U	10 U	10 U	20 U	10 U	10 U	10 U	20 U	10 U	10 U
1,2-Dibromoethane (EDB)	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,2-Dichloroethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,2-Dichloropropane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,3,5-Trimethylbenzene	2500 U	5 ∪	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
1,3-Dichloropropane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
2,2-Dichloropropane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
2-Chiorotoluene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
4-Chlorotoluene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Benzene	2500 U	5 U	. 5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Bromobenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Bromochloromethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Bromodichloromethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Bromoform	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Bromomethane	5000 U	10 U	10 U	20 U	10 U	10 U ·	10 U	20 U	10 U	10 U
Carbon tetrachloride	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Chlorobenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Chlorodibromomethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Chloroethane	5000 U	10 U	10 U	20 U	10 U	10 U	10 U	20 U	10 U	10 U
Chloroform	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Chloromethane	5000 U	10 U	10 U	20 U	10 U	10 U	10 U	20 U	10 U	10 U

										4=000004
Sample ID	17G02401D	17G02501	17G02601	17G02701	17G02801	17G02901	17G03001	17G03101	17G03201	17G03301 A8F240177008
Lab ID	A8F200131005	A8F200131004	A8F180155002	A8F180155003	A8F180155004	A8F240177002	A8F240177005	A8F240177006	A8F240177007	23-Jun-98
Sampling Date	18-Jun-98	18-Jun-98	17-Jun-98	17-Jun-98	17-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-3411-90
Volatile organics, µg/L										
cis-1,2-Dichloroethene	1200 U	0 78 J	1.9 J	360	2.3 J	2.5 U	1.1 J	220	81	2.5 U
cis-1,3-Dichloropropene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Dibromomethane	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Dichlorodifluoromethane	5000 U	10 U	10 U	20 U	10 U	10 U	10 U	20 U	10 U	10 U
Ethylbenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Hexachlorobutadiene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Isopropylbenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
m-Dichlorobenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
m-Xylene & p-Xylene	1200 U	2.5 U	2.5 U	.5 U	2.5 U	2.5 U	2.5 U	5 U	2.5 U	2.5 U
Methylene chloride	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
n-Butyibenzene	2500 U	5 U	5 U	10 U	5 U	5 U	1.5 J	10 U	5 U	5 U
n-Propyibenzene	2500 U	5 U	5 U	10 U	5 U	5 U	0.81 J	10 U	5 U	5 U
Naphthalene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
o-Dichlorobenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	. 5 U	5 U
o-Xylene	1200 U	2.5 U	2.5 U	5 U	2.5 U	2.5 U	2.5 U	5 U ·	2.5 U	2.5 U
p-Dichlorobenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
p-isopropyltoluene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
sec-Butylbenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Styrene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
tert-Butylbenzene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Tetrachloroethene	2500 U	0.49 J	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Toluene	2500 U	5 U	5 U	1.8 J	5 U	5 U	5 U	1 1	5 U	5 U
trans-1,2-Dichloroethene	1200 U	2.5 U	2.5 U	12	2.5 U	2.5 U	2.5 U	2.2 J	1.9 J	2.5 U
trans-1,3-Dichloropropene	2500 U	5 U	5 U	10 U	5 U	5 U	5 U	10 U	5 U	5 U
Trichloroethene	72000	39	5 U	60	1.4 J	2.5 J	5 U	10 U	5 U	5 U
Trichlorofluoromethane	5000 U	10 U	10 U	20 U	10 U	10 U	10 U	20 U	10 U	10 U
Vinyl chloride	5000 U	10 U	13	360	10 U	10 U	1 J	130	82	10 U

		1	·		T		·	·
Sample ID	17Q00104	17Q00202	17Q00305	17Q00308	17Q00403	17Q00703	17Q01005	17Q01203
Lab ID	A8C200122003	A8C200122002	A8C210123001	A8D070152005	A8C210123002	A8C240156001	A8C240156002	A8C2401560
Sampling Date	18-Mar-98	17-Mar-98	17-Mar-98	4-Apr-98	17-Mar-98	18-Mar-98	21-Mar-98	20-Mar-98
Volatile organics, μg/L								
1,1,1,2-Tetrachloroethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
1,1,1-Trichloroethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
1,1,2,2-Tetrachloroethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
1,1,2-Trichloroethane	17 U	250 U	5 U	0.51 J B	170 U	5 U	25 U	50 U
1,1-Dichloroethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
1,1-Dichloroethene	2.8 J	78 J	5 U	5 U	170 U	5 U	3.3 J	17 J
1,1-Dichloropropene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
1,2,3-Trichlorobenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
1,2,3-Trichloropropane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
,2,4-Trichlorobenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
,2,4-Trimethylbenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
,2-Dibromo-3-chloropropane	33 U	500 U	10 U	10 U	330 U	10 U	50 U	100 U
,2-Dibromoethane (EDB)	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
,2-Dichloroethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
,2-Dichloropropane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
,3,5-Trimethylbenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
,3-Dichloropropane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
2,2-Dichloropropane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
2-Chlorotoluene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
-Chlorotoluene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Benzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Bromobenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Bromochloromethane	17 Ú	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Bromodichloromethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Bromoform	17 U	250 U	5 U	0.58 J B	170 U	5 U	25 U	50 U
Iromomethane	33 U	500 U	10 U	10 U	330 U	10 U	50 U	100 U
Carbon tetrachloride	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Chlorobenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Chlorodibromomethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Chloroethane	33 U	500 U	10 U	10 U	330 U	10 U	50 U	100 U
Chloroform	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U

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Table C-3.4. Summary of DPT Groundwater Analytical Results, Volatile Organics
Groundwater Evaluation, Phase II, Study Area 17

Sample ID	17Q00104	17Q00202	17Q00305	17Q00308	17Q00403	17Q00703	17Q01005	17Q01203
Lab ID	A8C200122003	A8C200122002	A8C210123001	A8D070152005	A8C210123002	A8C240156001	A8C240156002	A8C240156004
Sampling Date	18-Mar-98	17-Mar-98	17-Mar-98	4-Apr-98	17-Mar-98	18-Mar-98	21-Mar-98	20-Mar-98
Volatile organics, μg/L				1.0				
Chloromethane	33 U	500 U	10 U	10 U	330 U	1.1 J	50 U	100 U
cis-1,2-Dichloroethene	480	5900	8.6	8.7	1300	2.5 U	720	1900
cis-1,3-Dichloropropene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Dibromomethane	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Dichlorodifluoromethane	33 U	500 U	10 U	10 U	330 U	10 U	50 U	100 U
Ethylbenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Hexachlorobutadiene	17 U	250 U	2.1 J	5 U	170 U	5 U	25 U	50 U
Isopropylbenzene	17.U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
m-Dichlorobenzene	17 U	250 U	5 U	0.65 J B	170 U	5 U	25 U	50 U
m-Xylene & p-Xylene	8 3 U	120 U	2.5 U	2.5 U	83 U	2.5 U	12 U	25 U
Methylene chloride	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
n-Butylbenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
n-Propylbenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Naphthalene	9.3 J	250 U	4.2 J	5 U	170 U	5 U	25 U	50 U
o-Dichlorobenzene	17 U	250 U	5 U	0.89 J	170 U	5 U	25 U	50 U
o-Xylene	8.3 U	120 U	2.5 U	2.5 U	83 U	2.5 U	12 U	25 U
p-Dichlorobenzene	17 U	250 U	5 U	0.86 J B	170 U	5 U	25 U	50 U
p-Isopropyltoluene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
sec-Butylbenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Styrene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
tert-Butylbenzene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Tetrachloroethene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Toluene	1.9 J	250 U	5 U	5 U	21 J	5 U	25 U	50 U
trans-1,2-Dichloroethene	8.3 U	69 J	2.5 U	2.5 U	83 U	2.5 U	11 J	54
trans-1,3-Dichloropropene	17 U	250 U	5 U	5 U	170 U	5 U	25 U	50 U
Trichloroethene	380	1300	0.82 J	1.1 J	5700	5 U	640	75
Trichlorofluoromethane	33 U	500 U	10 U	10 U	330 U	10 U	50 U	100 U
Vinyl chloride	90	2300	2 J	9.5 J	230 J	10 U	16 J	140

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Table C-3 4 Summary of DPT Groundwater Analytical Results, Volatile Organics
Groundwater Evaluation, Phase II, Study Area 17

Sample ID	17Q0		17Q0	1306	17Q0	1607	17Q0	1704
Lab ID	A8C240		A8D070	152006	A8D070	152007	A8D070	15200
Sampling Date	20-M	ar-98	4-Ap	г-98	4-Apı	r-98	25-Ma	r-98
Volatile organics, μg/L								]
1,1,1,2-Tetrachloroethane	50	U		5 U	5	U	17000	<del>                                     </del>
1,1,1-Trichloroethane	50	U			5		17000	
1,1,2,2-Tetrachloroethane	50	U	5	_1.	5		17000	1.
1,1,2-Trichloroethane	50	Ū	5		5	L	17000	1
1,1-Dichloroethane	50	U	5	Ū	5		17000	-
1,1-Dichloroethene	14	J	5	1 -	5	lu l	17000	
1,1-Dichloropropene	50	U	5	Ū	5	U	17000	1
1,2,3-Trichlorobenzene	50	Ū	5		5	U	17000	
1,2,3-Trichloropropane	50	U	5		5	U	17000	
1,2,4-Trichlorobenzene	50	Ū		U	5	U	17000	_
1,2,4-Trimethylbenzene	50	Ū		Ü	5	U	17000	-
1,2-Dibromo-3-chloropropane	100	1-		U	10		33000	
1,2-Dibromoethane (EDB)	50	u		U	5	U	17000	-
1,2-Dichloroethane	50	lu l		Ü		U	17000	
1,2-Dichloropropane	50		5		5	_	17000	
1,3,5-Trimethylbenzene	50	L	5	<del>u</del>	5		17000	
1,3-Dichloropropane	50	1 - 1	5	<del>u</del>	5		17000	-
2,2-Dichloropropane	50	[ ]	5	Ü	5		17000	-
2-Chlorotoluene	50	lu	5	Ü	5	1	17000	
1-Chlorotoluene	50	U		Ü		<del>u</del>	17000	_
Benzene	50		5	LT. I		U		
Bromobenzene	50			<del>Ŭ</del>		U	17000 17000	
Bromochloromethane	50			U	5	- 1		
Bromodichloromethane	50	_		U U		U	17000	-
Bromoform		Ü	5			U	17000	
Bromomethane		Ü	10				17000	
Carbon tetrachloride	50			<del>0</del>	10		33000 (	_
Chlorobenzene	50		5	- 1			17000 L	
Chlorodibromomethane	50			U	5		17000 L	
Chloroethane	100			U	5 (		17000 L	
hloroform	50		10		10 l		33000 L	

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Table C-3.4. Summary of DPT Groundwater Analytical Results, Volatile Organics
Groundwater Evaluation, Phase II, Study Area 17

Sample ID			17Q01		17Q01		17Q017	
Lab ID	A8C2401	56003	A8D0701	52006	A8D0701		A8D07015	
Sampling Date	20-Ma	-98	4-Apr-	98	4-Apr-	98	25-Mar	-98
/olatile organics, µg/L						A 1	33000	
Chloromethane	100	U	10	U	10		8300	
cis-1,2-Dichloroethene	790		5.6		2.5		17000	
cis-1,3-Dichloropropene	50	1		U	5		17000	
Dibromomethane	50		5	U	5		33000	
Dichlorodifluoromethane	100		10		10		17000	
Ethylbenzene	50	1	5	U	1	U	1	
Hexachlorobutadiene	50	U	5	U	1	U	17000	
Isopropylbenzene	1	U	5		5		17000	
m-Dichlorobenzene	50	U		U	5	U	17000	
m-Xylene & p-Xylene	25	U	2.5		2.5		8300	
Methylene chloride	50	U		U		U	17000	
n-Butylbenzene		U	5		5		17000	
n-Propylbenzene		U	5		5		17000	
Naphthalene	50	U	5		5	1	17000	
o-Dichlorobenzene		U	5	1	1	U	17000	
o-Xylene		Ü	2.5	1	2.5	1	8300	
p-Dichlorobenzene	50	U	1	U		U	17000	
p-Isopropyltoluene	50	U		. 1		U	17000	
sec-Butylbenzene	50	U		U		U	17000	
Styrene	50	Ū		U		U	17000	
tert-Butylbenzene	50	บ		Ū	5	. 1	17000	
Tetrachloroethene	50	U	!	5 U			17000	
Toluene	50	υ		Ū		1	17000	
trans-1,2-Dichloroethene	4:	5	2.5	U		U	8300	
trans-1,3-Dichloropropene	5	วีบ		5 U			17000	1 -
Trichloroethene	130	0	8.	7	1.9	J	340000	
Trichlorofluoromethane	1	υ	11	υ	1	υ	33000	-
Vinyl chloride	1	8 J	1	υ	10	υ	33000	)U_

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Table C-3.4. Summary of DPT Groundwater Analytical Results, Volatile Organics
Groundwater Evaluation, Phase II, Study Area 17

Sa	imple ID			17Q02		17Q0		17Q02		17Q02	805	17Q03	3001
*	Lab ID	A8D1101				A8D110116008		A8D1101	16004	A8D110116006		A8D110116003	
Sampli	ing Date	7-Apr	-98	7-Apr-98		8-Ap	r-98	9-Apr	-98	8-Apr-98		9-Apr-98	
Volatile organics, µg/L								1				<del></del>	T
1,1,1-Trichloroethane	-	170	Ü	5	U	1	U	1	u	1	U	1	U
1,1,2,2-Tetrachloroethane		170	U	. 5	U	1	U	1	U		Ū		U
1,1,2-Trichloroethane	1	170	U	- 5	U	1	U		Ū		Ū		U
1,1-Dichloroethane	1	170	U	5	Ū	1	U		Ū		Ŭ		Ü
1,1-Dichloroethene		170	U	5	U	1	U	1	Ü	0.17	<u> </u>	0.12	
1,2-Dichloroethane		170	U	5	Ū	1	U	1	ū		Ü		U
1,2-Dichloroethene (total)		3400		73			U	31		12		9.4	1.
1,2-Dichloropropane	1	170	U		U		Ū		U		U		<del> </del> u-
2-Butanone		1700	U	50	U		U	10		10			Ü
2-Hexanone		1700	Ū	50	U		Ū	10	-	10	L I		U
4-Methyl-2-pentanone		1700	U	50			Ū	10		10		10	
Acetone		1700	U	50		38		10		20	-	10	
Benzene	•	170	υ	5	u		U		Ū I		U		Ü
Bromodichloromethane	•	170	U .	5	U	1	U	1	Ŭ		<del>u</del>		U
Bromoform	1	170	U	same and the same	U		Ū	1	_	1	- ;		u
Bromomethane	1	330	u -	10	Ū		Ū	2		2			Ü
Carbon disulfide	t	170	U	5		4	1	4.8	<del>-</del>	1.4	<del>-</del>		Ü
Carbon tetrachloride	1	170	U		Ū		u	1		1	11		Ü
Chlorobenzene	1.	170	Ū	5	<del>ŭ</del>		ŭ	1		1			Ü
Chloroethane	- 1	330	1	10	L		Ū	2	- 1	2			U
Chloroform	1	170		5	1		Ü	1		1			U
Chloromethane	1	330		10		0.15		2	- 1	0.12	- 1		U
is-1,3-Dichloropropene	1	170		5	_		Ü		<del>U</del>	1			U
Dibromochloromethane		170		5	1		Ü			1			U
thylbenzene		170		5			Ü	1					L
Methylene chloride		170		5			υ	1		1			U
Styrene		170		5			U			1			
etrachloroethene		170		5		***************************************	U		-	1			U
oluene		170		5	1		U	1				1	
rans-1,3-Dichloropropene		170		5			U	1		1		0.09	
richloroethene		170	- 1	1.5		1				1	U	1	
/inyl chloride		330	- 1	1.0			U	1		2.3		1	_
(ylenes (total)		170		5		1		2		5.7 1		1.2	

#### TABLE C-4

SUMMARY OF SURFACE WATER ANALYTICAL RESULTS

Appendix C
Table C-4. Summary of Surface Water Analytical Results, Groundwater Evaluation, Phase II
Study Area 17

Sample ID	17W02600	17W02700	17W02800	17W02900
Lab ID	G7582009	G7582008	G7582007	G7582006
Sampling Date	16-May-95	16-May-95	16-May-95	16-May-95
Volatile organics, µg/L				
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U
Acetone	13	9 J	10 U	7 J
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	10 U
Carbon tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chloroethane	10 U		10 U	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Dibromochloromethane	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
Methylene chloride	10 U	10 U	10 U	10 U
Styrene	10.0	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U		
Toluene			10 U	10 U
	8.J	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	10 U
Xylene (total)	10.0	10.U	10 U	10 U
Semivolatile organics, µg/L				No. 356 Strate Aug 1
1.2.4-Trichlorobenzene	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U
1.3-Dichlorobenzene	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane)	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U	10 U
2.4-Dimethylphenol	10 U	10 U	10 U	10 U
2,4-Dinitrophenol .	25 U	25 U	25 U	25 ป
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U
2-Chloronaphthalene	10 U	10 U	10 U	10 U
2-Chlorophenol	10 U	10 U	10 U	10 U
2-Methylnaphthalene	10 U	10 U	10 U	10 U
2-Methylphenol	10 U	10 U	10 U	10 U
2-Nitroaniline	25 U	25 U	25 U	25 U
2-Nitrophenol	10 U	10 U	10 U	10 U

## Appendix C Table C-4. Summary of Surface Water Analytical Results, Groundwater Evaluation, Phase II Study Area 17

Sample ID	17W02600		V02700		17W028			17W0290	
Lab ID	G7582009		582008		G75820			G758200	
Sampling Date	16-May-95	16-	May-95	5	16-May			16-May-9	
,3'-Dichlorobenzidine	10 U		10 L	J		U		10	
-Nitroaniline	25 U		25 L			U		25	
,6-Dinitro-2-methylphenol	25 U		25 L	3		U		25	
-Bromophenyl-phenylether	10 U		10 L	J		טנ		10	
-Chioro-3-methylphenol	10 U		10 (	J		טט		10	
-Chloroaniline	10 U		10 l	J		U		10	
-Chlorophenyl-phenylether	10 U	<b>-</b>	10 (	J	11	O U		10	
Methylphenol	4 J		10	J		0 U		10	
Methylpheriol Nitroaniline	25 U	+	25	Ū		5 U		25	
4-Nitrophenol	25 U	1	25	Ū	2	5 U		25	
	10 U		10	Ū		0 0		10	
Acenaphthene	10 U	1	10	U		0 U	Т	10	U
Acenaphthylene	10 U	+	10	U	1	0 U			U
Anthracene	10 U	+-	10	U	1	0 0			U
Benzo(a)anthracene	10 U	+-	10			0 U			U
Benzo(a)pyrene	10 U	+-		Ū	1	0 U			U
Benzo(b)fluoranthene	10 U			Ū		0 U			U
Benzo(g,h,i)perylene	10 U	+-	10		1	0 U		10	
Benzo(k)fluoranthene bis(2-Chloroethoxy)methane	10 0	+		U	-	io U	ī		U
bis(2-Chioroethoxy)methane	10 U	+	10	Ū		10 U	1	10	บ
bis(2-Chloroethyl)ether	10 U		10			10 U	,	10	Ü
bis(2-Ethylhexyl)phthalate	10 U		10			10 L	_	10	טע
Butylbenzylphthalate	10 U		10		<del>                                     </del>	10 L	<u>,                                    </u>	10	טומ
Carbazole	+		10		1	10 L	1	10	οU
Chrysene	10 0		10			10 L		1	οŪ
Di-n-butylphthalate	10 L			U		10 L		1	0 U
Di-n-octylphthalate	10 0			υ		10 1			0 U
Dibenz(a,h)anthracene				U		10 (		1	0 U
Dibenzofuran	10 L			U	<del> </del>	10 (			οU
Diethylphthalate				U		10 1		1	0 U
Dimethylphthalate	10 0			U	<del> </del>	10			0 U
Fluoranthene	10 \			U	+	10		1	0 U
Fluorene	10 l			טונ		10	-		0 U
Hexachlorobenzene	10			U	+	10			0.0
Hexachlorobutadiene	10 1			טונ	+		U		0 U
Hexachlorocyclopentadiene	10:1			טונ	+	10			0 U
Hexachloroethane	1011			טוכ	-	10			10 U
Indeno(1,2,3-cd)pyrene	10			טונ		10			10 U
Isophorone	10			ט ט ט	+	10			10 U
N-Nitroso-di-n-propylamine	10				+	10			1010
N-Nitrosodiphenylamine (1)	10			0 0		10			10 U
Naphthalene	10			0 U		10			10 U
Nitrobenzene	10			0 U		25			25 U
Pentachlorophenol	25			5 U		10			10 U
Phenanthrene	10			0 U					10 U
Phenol	2			0 U		10		<del> </del>	10 U
Pyrene	10	U	1	0 U		10	10		.0,0
Pesticides/PCBs, µg/L				+		0.1	1111	<del> </del>	3 1 1 1
4,4'-DDD	0.1			.1 U		0.1	UJ		0.1 U
4,4'-DDE		UJ		.1 U			UJ		
4,4'-DDT		UJ		.1 L			UJ		0.1 U
Aldrin	0.05			)5 L			ΩJ		.05 U
alpha-BHC	0.05	UJ		)5 L			UJ		.05 L
alpha-Chlordane	0.05	IJJ	0.0	)5 L	JJ	0.05	UJ	0	.05 L

Appendix C
Table C-4. Summary of Surface Water Analytical Results, Groundwater Evaluation, Phase II
Study Area 17

The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s

Sample ID			17W027	00	17W028	00	17W02900		
Lab ID	G75820	9	G75820		G758200	07	G75820	06	
Sampling Date	16-May-	95	16-May-	95	16-May-	95	16-May-	95	
Aroclor-1016	0.5	UJ	0.5	UJ	0.5	IJ	0.5	U.	
Aroclor-1221	0.5	UJ	0.5	UJ	0.5	IJ	0.5	U.	
Aroclor-1232	0.5	UJ	0.5	UJ	0.5	UJ	0.5	U.	
Aroclor-1242	0.5	UJ	0.5	UJ	0.5	ÚJ	0.5	Ū.	
Aroclor-1248	0.5	UJ	0.5	UJ	0.5	UJ	0.5	U.	
Aroctor-1254	0.5	UJ	0.5	UJ	0.5	IJ	0.5	U.	
Aroclor-1260	0.5	υJ	0.5	UJ	0.5	IJ	0.5	U.	
beta-BHC	0.05	UJ	0.05	UJ	0.05	UJ	0.05	Ū.	
delta-BHC	0.05	IJ	0.05	UJ	0.05	UJ	0.05	U.	
Dieldrin	0.1	UJ	0.1	UJ	0.1		0.1	Ü.	
Endosulfan I	0.05		0.05		0.05		0.05		
Endosulfan II	0.1		0.1	-	0.1		0.1		
Endosulfan sulfate	0.1		0.1		0.1		0.1	-	
Endrin	0.1		0.1		0.1		0.1		
Endrin aldehyde	0.1		0.1		0.1		0.1	—-	
Endrin ketone	0.1		0.1		0.1		0.1		
gamma-BHC (Lindane)	0.05	UJ	0.05		0.05		0.05		
gamma-Chlordane	0.05		0.05		0.05		0.05		
Heptachlor	0.05		0.05		0.05		0.05		
Heptachlor epoxide	0.05	I	0.05		0.05		0.05		
Methoxychlor	0.5		0.5	<b></b>	0.5		0.5		
Toxaphene		UJ		UJ		UJ		U.	
norganics, µg/L				-					
Aluminum	1050		944		418	1,575	173	B	
Antimony	29.6	11	29.6	П	29.6		29.6	<u></u>	
Arsenic	1.9		1.9		1.9		1.9		
Barium	31.7		26.4		367	-	122	-	
Beryllium	0.13		0.25		0.1	11	0.1		
Cadmium	3.1		3.1	_	3.1		3.1	ı	
Calcium	22100	-	19300	<u>-</u>	29500	-	34800		
Chromium	5.6		3.1	U		11	3,1000	┷	
Cobalt	2.9		2.9		2.9		2.9	-	
Copper		U	5.8		1.4		1.4	1:	
Iron	9400	-	4000		2140		1790	-	
Lead	4.9		4.6		2.4		1.5	<u> </u>	
Magnesium	2020		2520		4350	<u> </u>	6230		
Manganese	73.8		30.9		22		16.2		
Mercury	0.12	<del></del>	0.12		0.12		0.12	<u>.                                    </u>	
Vickel	14.2	-	14.2		14.2		14.2	<del></del>	
Potassium	1930		3220		14.2	<u> </u>	1140	_	
Selenium	2.3		2.3		2.3		2.3		
· · · · · · · · · · · · · · · · · · ·		•	2.3		2.5		2.5		
Silver	2.6				7580				
Sodium	2180		2730 1.8				14600		
Thallium	18.1				1.8	_	1.8		
Vanadium	9.7		6.5		2.5		2.5	+	
Zinc	37.5		52.1		23.5		6.5	۳	
General Chemistry, mg/L					74			-	
Alkalinity as CaCO3  Total Petroleum Hydrocarbons	47		39 2.8		71 2.4		97 2	-	
							2	•	

Sample ID	17W03001	17W03101	17W03201 A8F240177010	17W03301 A8F240177011	17W03401 A8F240177012	
Lab ID	A8F240177003	A8F240177009		23-Jun-98	23-Jun-98	
Sampling Date	23-Jun-98	23-Jun-98	23-Jun-98	23-3011-30	25 55.11 55	
olatile organics, µg/L					5 U	
1,1,2-Tetrachloroethane	5 U	5 U	5 ป	5 U	5 U	
1,1-Trichloroethane	5 U	5 U	5 U	5 U	5 U	
1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	
1,2-Trichloroethane	5 U -	5 U	5 U	5 U	5 U	
1-Dichloroethane	5 U	5 U	5 U	5 U	5 U	
1-Dichloroethene	5 U	5 U	5 U		5 U	
1-Dichloropropene	5 U	5 U	5 U	5 U	5 U	
2,3-Trichlorobenzene	5 U	5 U	5 U	5 U	5 U	
2,3-Trichloropropane	5 U	5 U	5 U	1	50	
2,4-Trichlorobenzene	5 U	5 U	5 U	5 U	5 U	
2,4-Trimethylbenzene	5 U	5 U	5 U	1 71	10 U	
2-Dibromo-3-chloropropane	10 U	10 U	10 U	10 U	5 U	
2-Dibromoethane (EDB)	5 U	5 U	5 U	5 U	5 U	
2-Dichloroethane	5 U	5 U	5 U	5 U	5 U	
,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	
3,5-Trimethylbenzene	5 U	5 U	5 U	5 U	5 U	
,3-Dichloropropane	5 U	5 U	5 U	5 U	5 U	
2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	
-Chlorotoluene	5 U	5 U	5 U		5 U	
-Chlorotoluene	5 U	5 U	5 U	5 U	50	
Benzene	5 U	5 U	5 U	5 U	5 U	
Bromobenzene	5 U	5 U	5 U	5 U	5 U	
Bromochloromethane	5 U	5 U	5 U	5 U	5 U	
Bromodichloromethane	5 U	5 U	5 U	5 U	5 U	
Bromoform	5:U	5 U	5 U	10 U	10 U	
3romomethane	10 U	10 U	10 U	5 U	5 U	
Carbon tetrachloride	5 U	5 U	5 U	5 U	5 U	
Chlorobenzene	5 U	5 U	5 U		5 U	
Chlorodibromomethane	5 U	5 U	5 U	5 U 10 U	10 U	
Chloroethane	10 U	10 U	10 U	10 U	5 U	
Chloroform	5 U	0 92 J	5 U	10 U	10 U	
Chloromethane	10 U	10 U	10 U	2.5 U	2.5 U	
cis-1,2-Dichloroethene	2.5 U	2 5 U	2.5 U	2.5 U	5 U	
cis-1,3-Dichloropropene	5 U_	5 U	5 U	5 U	5 U	
Dibromomethane	5 U	5 U	5 U	10 U	10 U	
Dichlorodifluoromethane	10 U	10 U	10 U	5 U	5 U	
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	
Hexachlorobutadiene	5 U	5 U	5 U	5 U	5 U	
Isopropylbenzene	5 U	5 U	5 U	5 U	5 U	
m-Dichlorobenzene	5 U	5 U	5 U	2.5 U	2.5 U	
m-Xylene & p-Xylene	2 5 U	2 5 U	2.5 U	5 U	5 U	
Methylene chloride	5 U	5 U	5 U	5 U	5 U	
n-Butylbenzene	5 U	5 U	5 U	5 U	5 U	
n-Propylbenzene	5 U	5 U	5 U	5 U	5 U	
Naphthalene	5.U	5 U	5 U	5 U	5 U	
o-Dichlorobenzene	5 U	5.U	5 U	2.5 U	2.5 U	
o-Xylene	2.5 U	2 5 U	2.5 U 5 U -	2.5 U	5 U	
p-Dichlorobenzene	5 U	5 U	5 U -	5 U	5 U	
p-Isopropyltoluene	5 U	5 U	5 U	5 U	5 U	
sec-Butylbenzene	5 U	5 U	5 U	5 U	5 U	
Styrene	5 U	5 U	5 U	5 U	5 U	
tert-Butylbenzene	5 U	5 U	5 U	5 U	5 U	
Tetrachloroethene	5 U	5 U	17	18	25	
Toluene	5.2	20	2.5 U	2.5 U	2.5 U	
trans-1,2-Dichloroethene	2.5 U	2.5 U	2.5 U	5 U	5 U	
trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	
Trichloroethene	1.2 J	5 U	10 U	10 U	10 U	
Trichlorofluoromethane	10 U	10 U	טוטר ו	1010	, , , ,	

TABLE C-5

SUMMARY OF SEDIMENT ANALYTICAL RESULTS

## Appendix C Table C-5. Summary of Sediment Analytical Results Study Area 17

Sample ID	17D02600	17D02700	17D02800	17D02900	17D03001	17D03101	1700004	4700004	47000.00
Lab ID	G7678009	G7678008	G7678007	G7678006	A8F240177004	A8F240177013	17D03201 A8F240177014	17D03301 A8F240177015	17D03401 A8F240177016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
Volatile organics, µg/kg		50 1110, 50		20 11109-00	25 3411-30	20-3011-30	23-3011-90	23-3411-96	23-Jun-98
1,1,1-Trichloroethane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
1,1,2,2-Tetrachloroethane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
1,1,2-Trichloroethane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
1,1-Dichloroethane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
1,1-Dichloroethene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
1,2-Dichloroethane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
1,2-Dichloroethene (total)	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
1,2-Dichloropropane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
2-Butanone	14 U	6 J	25 U	17 U	25 U	29 U	32 U	43 U	26 U
2-Hexanone	14 U	16 U	25 U	17 U	25 U	29 U	32 U	43 U	26 U
4-Methyl-2-pentanone	14 U	16 U	25 U	17 U	25 U	29 U	32 U	43 U	26 U
Acetone	9 J	21	30	14 J	25 U	29 U	32 U	43 U	26 U
Benzene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Bromodichloromethane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Bromoform	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Bromomethane	14 U	16 U	25 U	17 U	13 U	15 U	16 U	22 U	13 U
Carbon disulfide	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Carbon tetrachloride	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Chlorobenzene	14 U	16 U	25 U	117 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Chloroethane	14 U	16 U	25 U	17 U	13 U	15 Ú	16 U	22 U	13 U
Chloroform	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Chloromethane	14 U	16 U	25 U	17 U	13 U	15 U	16 U	22 U	13 U
cis-1,3-Dichloropropene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Dibromochloromethane	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Ethylbenzene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Methylene chloride	14 U	16 U	25 U	17 U	4.4 J	4.8 J	5.1 J	6 J	3.6 J
Styrene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Tetrachloroethene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Toluene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	1 J	0.51 J
trans-1,3-Dichloropropene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	. 11 U	6.5 U
Trichloroethene	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Vinyl chloride	14 U	16 U	25 U	17 U	13 U	0.72 J	16 U	22 U	13 U
Xylene (total)	14 U	16 U	25 U	17 U	6.3 U	7.3 U	7.9 U	11 U	6.5 U
Semivolatile organics, μg/kg									

## . Appendix C Table C-5 Summary of Sediment Analytical Results Study Area 17

### Naval Training Center, Orlando Orlando, FL

				Orlando, Fl			,		
Sample ID	17D02600	17D02700	17D02800	17D02900	17D03001	17D03101	17D03201	17D03301	17D03401
Lab ID	G7678009	G7678008	G7678007	G7678006	A8F240177004	A8F240177013	A8F240177014	A8F240177015	A8F240177016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
1.2.4-Trichlorobenzene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA NA
1,2-Dichlorobenzene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA NA
1,3-Dichlorobenzene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
2.2'-oxybis(1-Chloropropane)	1000 U	1200 U	1700 U	1300 UR	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
2,4-Dichlorophenol	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
2,4-Dimethylphenol	1000 U	1200 U	1700 U	1300 UR	NA	NA	NA	NA	NA
2,4-Dinitrophenol	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
2,6-Dinitrotoluene	420 U	460 U	690 U	520 UR	NA	NA	· NA	NA	NA
2-Chloronaphthalene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA .
2-Chlorophenol	420 U	460 U	690 U	520 UR		NA	NA	NA	NA NA
2-Methylnaphthalene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA .
2-Methylphenol	1000 U	1200 U	1700 U	1300 UR	NA	NA	NA	NA	NA
2-Nitroaniline	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
2-Nitrophenol	420 U	460 U	690 U	520 UR		NA	NA	NA	NA
3,3'-Dichlorobenzidine	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1200 U	1700 U	1300 UR		NA NA	NA	NA	NA
3-Nitroaniline	1000 U	1200 U	1700 U	1300 UR		NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	1000 U	460 U	690 U	520 UR		NA	NA	NA	NA
4-Bromophenyl-phenylether	420 U	460 U	690 U	520 UR		NA	NA	NA	NA
4-Chloro-3-methylphenol	420 U 420 U	460 U	690 U	520 UR		NA	NA	NA	NA
4-Chloroaniline		460 U	690 U	520 UR		NA	NA	NA	NA
4-Chlorophenyl-phenylether	420 U	460 U	690 U	520 UR		NA	NA	NA	NA
4-Methylphenol	420 U		1700 U	1300 UR		NA	NA NA	NA	NA
4-Nitroaniline	1000 U	1200 U	1700 U	1300 UR		NA	NA	NA	NA
4-Nitrophenol	1000 U	1200 U	410 J	520 UR		NA NA	NA	NA	NA
Acenaphthene	420 U	460 U		520 UR		NA NA	NA	NA	NA
Acenaphthylene	420 U	460 U	690 U	520 UR	· 1	NA NA	NA	NA	NA
Anthracene	420 U	460 U	310 J	520 UR	·	NA NA	NA NA	NA	NA
Benzo(a)anthracene	420 U	460 U	1000	520 UR		NA NA	NA NA	NA NA	NA
Benzo(a)pyrene	420 U	460 U	690 U	520 UR	1	NA NA	NA NA	NA	NA
Benzo(b)fluoranthene	420 U	460 U	660 J	520 UR		NA NA	NA NA	NA NA	NA
Benzo(g,h,i)perylene	420 U	460 U	690 U	520 UF	14/1	14/1		1	

Page 1 SA17., 2/23/99

## Appendix C Table C-5. Summary of Sediment Analytical Results Study Area 17

				Orlando, Fl					***
Sample ID	17D02600	17D02700	17D02800	17D02900	17D03001	17D03101	17D03201	17D03301	17D03401
Lab ID	G7678009	G7678008	G7678007	G7678006	A8F240177004	A8F240177013	A8F240177014	A8F240177015	A8F240177016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
Benzo(k)fluoranthene	420 U	460 U	590 J	520 UR	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	420 U	460 U	690 U	520 UR	NA NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
bis(2-Ethylhexyl)phthalate	420 U	460 U	630 J	520 UR	NA .	NA	NA	NA	NA
Butylbenzylphthalate	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Carbazole	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Chrysene	420 U	460 U	820	520 UR	NA	NA	NA	NA	NA
Di-n-butylphthalate	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Di-n-octylphthalate	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	420 U	460 U	210 J	520 UR	NA	NA	NA	NA	NA
Dibenzofuran	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Diethylphthalate	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Dimethylphthalate	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Fluoranthene	420 U	150 J	2100	520 UR	NA	NA	NA	NA	NA
Fluorene	420 U	460 U	320 J	520 UR	NA	NA	NA	NA	NA
Hexachlorobenzene	420 U	460 U	690 U	520 UR	NA	NA	. NA	NA	NA
Hexachlorobutadiene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Hexachloroethane	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Isophorone	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
N-Nitroso-di-n-propylamine	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine (1)	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Naphthalene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Nitrobenzene	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA
Pentachlorophenol	1000 U	1200 U	1700 U	1300 UR	NA	NA	NA	NA	NA
Phenanthrene	420 U	460 U	700	520 UR	NA	NA	NA	NA	NA
Phenol	420 U	460 U	690 U	520 UR	NA	NA	NA	NA	NA NA
Pyrene	420 U	460 U	540 J	520 UR	NA	NA	NA	NA	NA
Pesticides/PCBs, µg/kg									
4,4'-DDD	4.2 U	19 J	990 DJ	24 NJ	NA	NA	NA	,NA	NA I
4,4'-DDE	4.2 U	13	130 J	15	NA	NA	NA	NA NA	NA NA
4,4'-DDT	4.2 U	4.5 U	60 U	10 U	NA	NA	NA	NA.	NA NA
Aldrin	2.2 U	2.3 U	60 U	2.7 U	NA	NA	NA	NA NA	NA NA
alpha-BHC	2.2 U	2.3 U	31 U	2.7 U	NA	NA	NA NA	NA NA	NA NA

# Appendix C Table C-5. Summary of Sediment Analytical Results Study Area 17

Naval Training Center, Orlando Orlando, Fl.

				Orlando, Fl					
Sample ID	17D02600	17D02700	17D02800	17D02900	17D03001	17D03101	17D03201	17D03301	17D03401
Lab ID	G7678009	G7678008	G7678007	G7678006	A8F240177004	A8F240177013	A8F240177014	A8F240177015	A8F240177016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
alpha-Chlordane	2.2 U	5.4	890 CD	14	NA	NA	NA	NA	NA
Aroclor-1016	42 U	45 U	600 U	52 U	NA	NA	NA	NA	NA
Aroclor-1010	86 U	92 U	1200 U	110 U	NA	NA	NA	NA	NA
Aroclor-1221	42 U	45 U	600 U	52 U	NA	NA	NA	NA	NA NA
Aroclor-1232	42 U	45 U	600 U	52 U	NA	NA	NA	NA	NA NA
Aroclor-1248	42 U	45 U	600 U	52 U	NA	NA	NA	NA	NA NA
Arocior-1254	42 U	45 U	600 U	52 U	NA	NA	NA	NA	NA NA
Aroclor-1260	42 U	45 U	600 U	52 U	NA	NA	NA	NA NA	NA NA
beta-BHC	2.2 U	2.3 U	31 U	2.7 U	NA	NA	NA	NA	NA NA
delta-BHC	2.2 U	2.3 U	31 U	2.7 U	NA	NA	NA	NA NA	NA NA
Dieldrin	4.2 U	4.5 U	60 U	3.3 J	NA	NA	NA	NA	NA NA
Endosulfan I	2.2 U	2.3 U	31 U	2.7 U	NA	NA	NA	NA	NA NA
Endosulfan II	4.2 U	4.5 U	60 U	5.2 U	NA	NA	NA	NA	NA NA
Endosulfan sulfate	4 2 U	4.5 U	60 U	5.2 U	NA	NA	NA	NA	NA NA
Endrin	4 2 U	4 5 U	60 U	5.2 U	NA .	NA	NA	NA NA	NA NA
Endrin aldehyde	4 2 U	4.5 U	60 U	5.2 U	NA	NA	NA	NA NA	NA NA
Endrin ketone	4 2 U	4.5 U	60 U	5.2 U	NA NA	NA	NA	NA NA	NA NA
gamma-BHC (Lindane)	2.2 U	2.3 U	31 U	2.7 U	NA	NA	NA	NA NA	NA NA
gamma-Chlordane	2.2 U	11	1800 CD	41	NA	NA NA	NA	NA NA	NA NA
Heptachlor	2.2 U	2.3 U	31 U	2.7 U	NA	NA	NA	NA NA	NA NA
Heptachlor epoxide	2.2 U	2 3 U	150 U	5.2 U	NA NA	NA	NA	NA NA	NA NA
Methoxychlor	22 U	23 U	310 U	27 U	NA	NA	NA	NA NA	NA NA
Toxaphene	220 U	230 U	3100 U	270 U	NA	NA	NA NA	NA .	11/4
Inorganics, µg/kg							<u> </u>	NA NA	NA
Aluminum	520	2480	2970	1540	NA	NA	NA	1 <u></u>	NA NA
Antimony	8.2 U	9.2 U	14.8 U	10.1 U	NA	NA	NA NA	NA NA	NA NA
Arsenic	1.5 B	1.6 J	3.5 J	1.5 J	NA	NA	NA	NA NA	NA NA
Barium	1.7 B	9.2 B	21.4 B	6.8 B	NA	NA	NA	NA NA	NA NA
Beryllium	0.03 U	0.11 B	0.22 B	0.15 B	NA	NA	NA		NA NA
Cadmium	0.86 U	0.96 U	1.6 U	1.4 B	NA	NA	NA	NA NA	NA NA
Calcium	112 B	353 B	12600	14500	NA	NA	NA	,NA	NA NA
Chromium	0.95 B	3.9	8.6	4.6	NA	NA	NA	NA NA	NA NA
Cobalt	0.8 U	0.9 U	2.3 B	0.98 U	NA	NA	NA	NA ·	NA NA
Copper	1.1 B	4.2 B	11.1 B	3.9 B	NA	NA	NA	NA	
Iron	232	1470	2500	1250	NA	NA	NA	NA	NA

# Appendix C Table C-5. Summary of Sediment Analytical Results Study Area 17

Naval Training Center, Orlando Orlando, FL

Sample ID	17D02600	17D02700	17D02800	17D02900	17D03001	17D03101	17D03201	17D03301	17D03401
Lab IC	1	G7678008	G7678007	G7678006	A8F240177004	A8F240177013		A8F240177015	A8F240177016
Sampling Date	26-May-95	26-May-95	26-May-95	26-May-95	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98	23-Jun-98
Lead	0.89 J	15.1 J	45.2 J	15.8 J	NA	NA	NA	NA	NA NA
Magnesium	12 B	80 3 B	191 B	141 B	NA	NA	NA	NA	NA
Manganese	03B	14B	4.7 B	2.1 B	NA	NA	NA	NA	NA NA
Mercury	0.03 U	0.09	0.27	0.06 B	NA	NA	NA	NA NA	NA NA
Nickel	3.9 U	4.4 U	7.1 U	4.8 U	NA	NA	NA	NA NA	NA NA
Potassium	122 U	138 ับ	222 U	151 U	NA	NA	NA	NA NA	NA NA
Selenium	0.63 U	0.71 U	1.1 U	0.78 U	NA	NA	NA	NA NA	NA NA
Silver	0.72 U	0 81 U	1 3 U	0.88 U	NA	NA	NA	NA NA	NA NA
Sodium	47 U	10 1 B	23 5 B	22.3 B	NA	NA	NA	NA NA	NA NA
Thallium	0 5 U	0 56 U	0 91 U	0.61 U	NA NA	NA	NA	NA NA	NA NA
Vanadium	25 B	4 7 B	10 2 B	6.1 B	NA	NA	NA	NA NA	NA NA
Zinc	6.2	30 5	78 5	35	NĀ	NA	NA NA	NA NA	NA NA
General Chemistry, mg/kg	i i	*							
Total Organic Carbon	2130	7800	24400	9770	NA	NA	NA	NA NA	NA NA
Total Petroleum Hydrocarbons	5.5 U	73.5	892	162	NA NA	NA	NA NA	NA NA	NA NA

#### APPENDIX D

TECHNICAL MEMORANDUM
GEOPHYSICAL SURVEY RESULTS

#### TECHNICAL MEMORANDUM GEOPHYSICAL SURVEYS STUDY AREA 17

# NAVAL TRAINING CENTER ORLANDO, FLORIDA

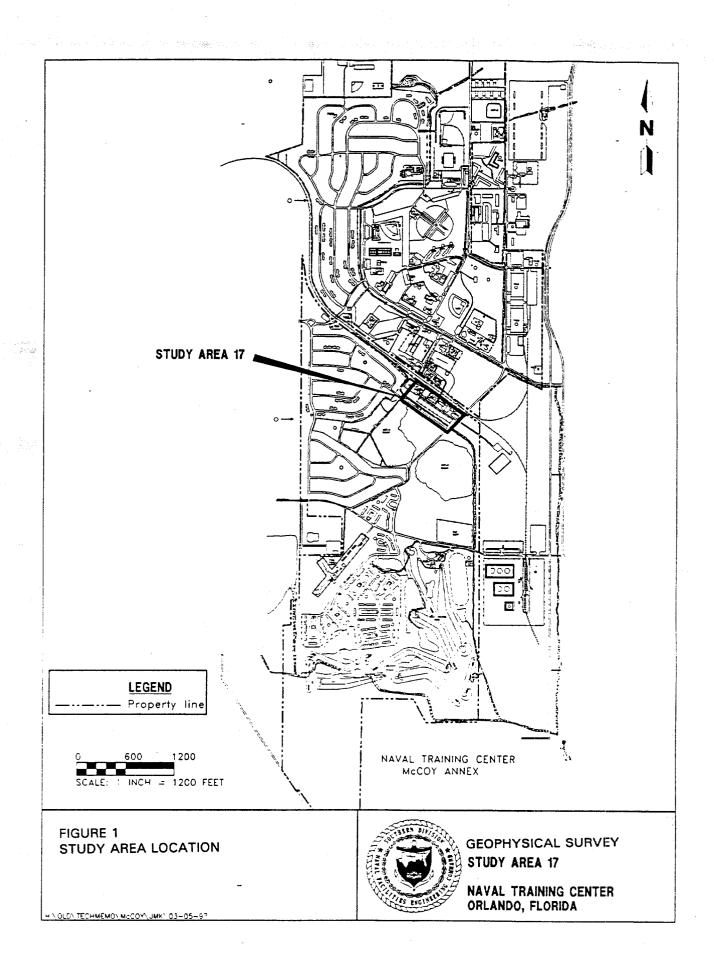
- 1.0 INTRODUCTION. The following is a summary of the significant findings of the geophysical surveys which took place at Study Area 17 between March 3 and April 14, 1995, at Naval Training Center in Orlando, Orange County, Florida (Figure 1). The geophysical surveys were conducted to evaluate potential subsurface debris disposal and to aid in clearing utilities for the subsurface investigations. The techniques used were magnetometry, terrain conductivity (TC), and ground-penetrating radar (GPR).
- 2.0 GEOPHYSICAL TECHNIQUES. The magnetic method is a versatile geophysical technique used for evaluating shallow geologic structures and for locating buried man-made objects and buried debris by mapping local distortions in the earth's magnetic field produced by buried magnetic objects (steel and other magnetic materials). Vertical gradient measurements of the earth's magnetic field are often taken during environmental magnetic surveys, as they are more sensitive to the presence of near-surface metal objects than total field values alone.

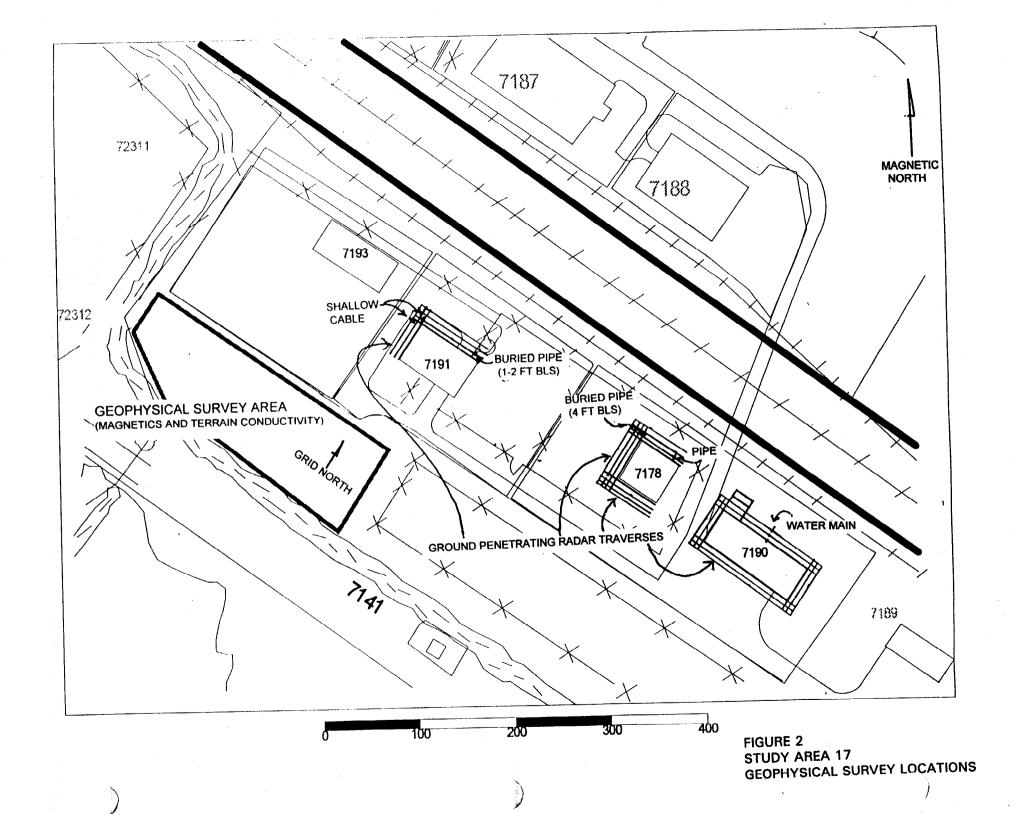
TC surveys, also referred to as EMI (electro-magnetic induction) surveys, have traditionally been used in mineral exploration for tracing conductive ore bodies (i.e., massive sulfides). More recently, conductivity surveys have been used in environmental studies for mapping buried debris and former structures, and for tracing conductive contaminant plumes in groundwater. TC instruments record two parameters, the quadrature phase and the in-phase components of an induced magnetic field. The quadrature-phase component is a measure of the ground conductivity value expressed in millimhos per meter. The in-phase component is significantly more sensitive to metallic objects and is useful for looking for buried tanks and drums and other man-made objects.

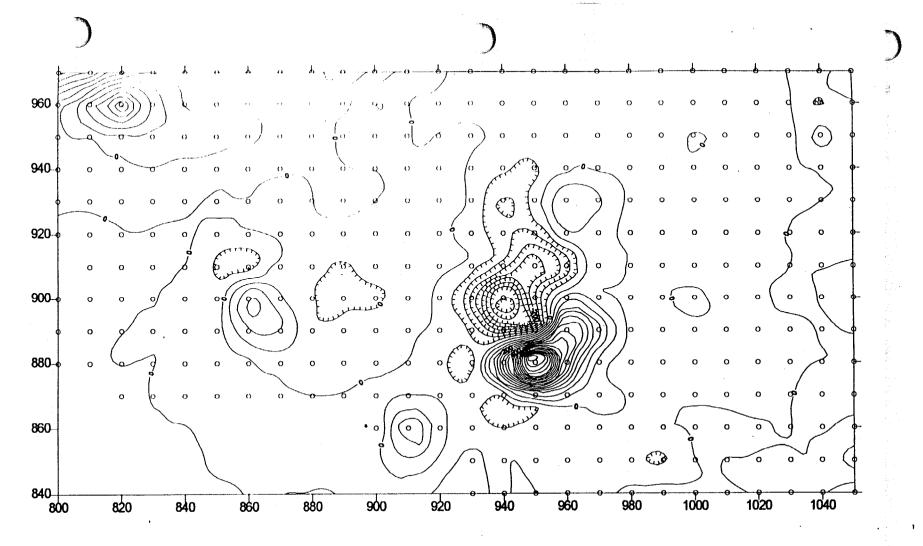
The GPR technique uses high-frequency radio waves to determine the presence of subsurface objects and structures. The radio wave energy is reflected from surfaces where there is a contrast in the electrical properties of subsurface materials, such as naturally occurring geologic horizons or man-made objects (e.g., buried utilities, tanks, drums). Typical applications for GPR include mapping buried utilities, and delineating the boundaries of buried hazardous waste materials and abandoned landfills.

3.0 RESULTS. Geophysical surveys included GPR surveys at Buildings 7178, 7190, and 7191. The GPR survey at Building 7178 was to determine the presence of an abandoned UST. The GPR surveys at Buildings 7190 and 7191 were to confirm the removal of former USTs. In addition, a combined magnetometer and TC survey, followed by a confirmatory GPR survey, was completed in the field south of Building 7193 to locate potential abandoned USTs and/or the presence and extent of releases of waste materials previously stored on site. These individual efforts are discussed separately below.

- 3.1 GPR SURVEYS AT BUILDINGS 7178, 7190 and 7191. GPR surveys were conducted on April 6 and April 10, 1995, around the building perimeters of Buildings 7178, 7190, and 7191. Generally, the procedure was to complete continuous traverse lines along the former building foundation in the area of interest and to add parallel traverse lines at distances of 5, 10, and 15 feet away from the foundation to map potential USTs. No USTs were mapped during this field effort. Figure 2 shows the buildings and the approximate locations of the traverses completed, along with some of the more obvious features that were mapped (buried pipe, a water main, and shallow buried cable).
- 3.2 MAGNETOMETER, TC, and GPR SURVEYS SOUTH OF BUILDING 7193. A geophysical grid with an arbitrary origin was established in the grassy field south and west of Building 7193 on March 3, 1995. Magnetometer and TC surveys were completed concurrently on March 13, 1995, in an area 250 feet long and 130 feet wide. A total of 325 data points were acquired on a 10-foot by 10-foot measurement grid with each instrument. Contour data is presented as Figures 3 through 5. Figure 3 presents the vertical magnetic gradient contours, and Figures 4 and 5 present the quadrature (conductivity) and in-phase (equivalent to a metal detector) contours of the magnetic field induced by the transmitter of the TC instrument. The data indicate a significant magnetic anomaly in the central portion of the survey area with a corresponding TC anomaly. The anomaly is centered at (arbitrary) grid coordinates X=950E and Y=890N. GPR traverses were completed in both directions in the vicinity of the anomaly (Figure 6). The geophysical data are consistent with a large buried metal object, possibly a UST.







Note: Contour Interval = 50 gammas

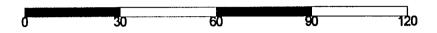
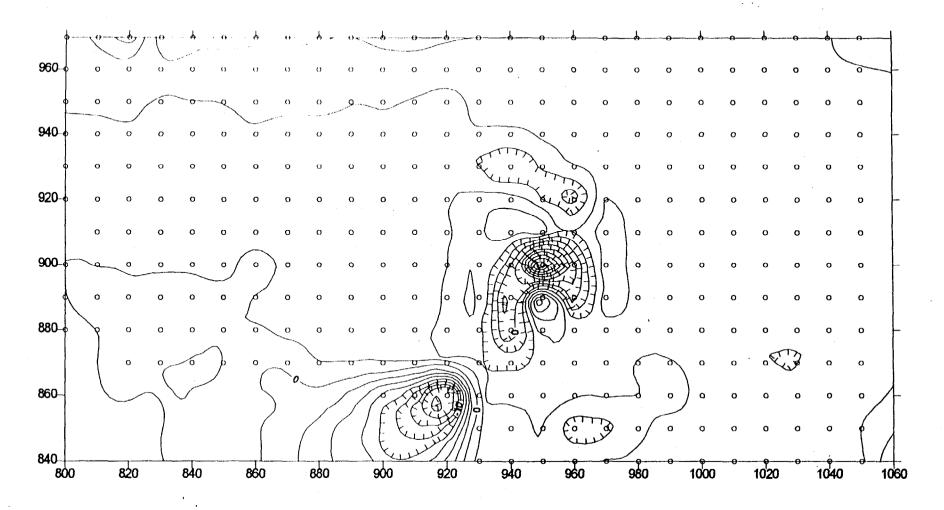


FIGURE 3 STUDY AREA 17 VERTICAL GRADIENT CONTOURS



Note: Contour Interval = 2 millimhos per meter

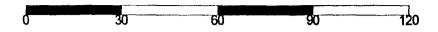
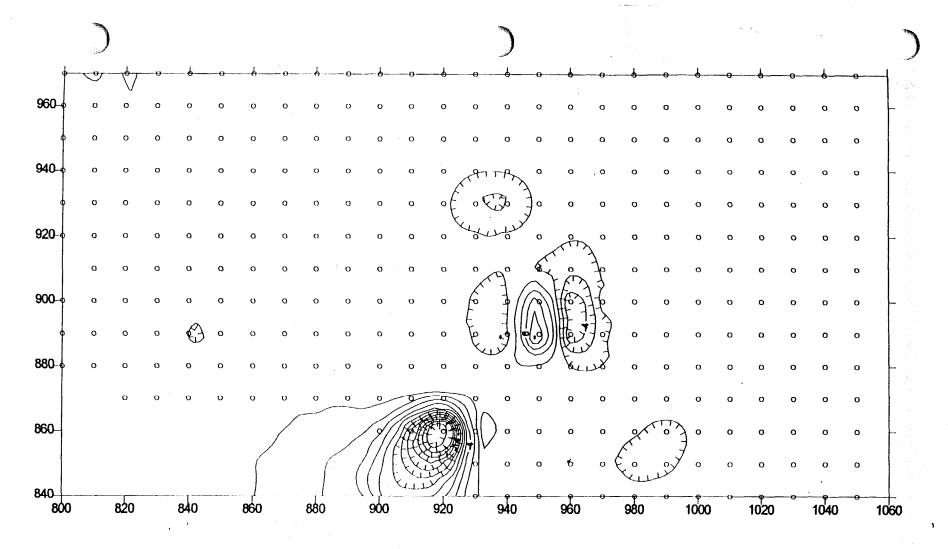


FIGURE 4 STUDY AREA 17 QUADRATURE (TC) CONTOURS



Note: Contour Interval = 2 (dimensionless)

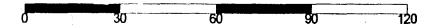
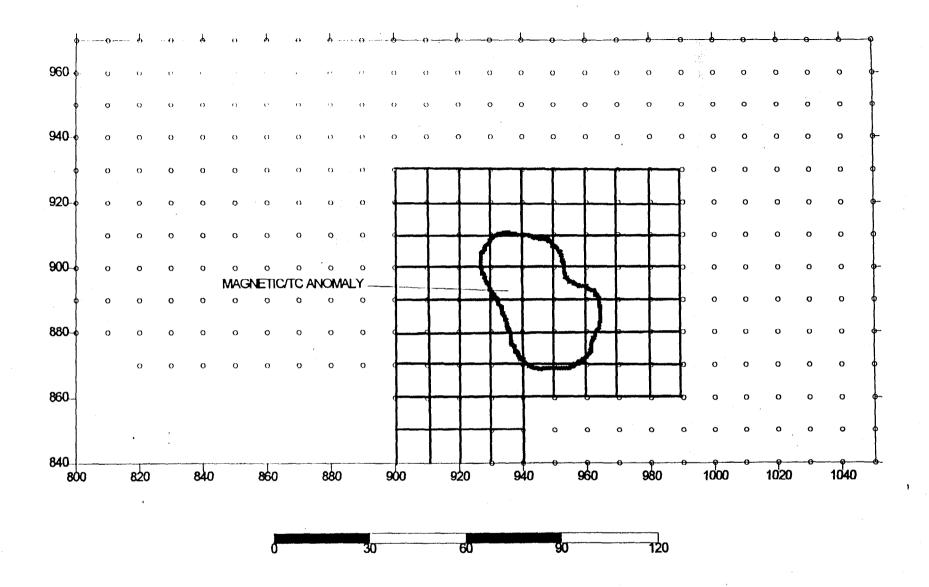


FIGURE 5 STUDY AREA 17 INPHASE (TC) CONTOURS



GPR TRAVERSES

FIGURE 6 STUDY AREA 17 MAGNETOMETER, TC, AND GPR SURVEYS

#### APPENDIX E

TECHNICAL MEMORANDUM TEST PITTING RESULTS



#### Tech Memo

To:

Rick Allen

cc:

John Kaiser

From:

Marc Hawes

Date:

September 11, 1996

Subject:

Test Pit Activities on September 6, 1996

The following pages summarize the test pit excavation events that took place on September 6, 1996 and the anomalies encountered at those sites. A photographic log was taken and inserted into the back of this memo. Site maps are also present as Figures 1,2 & 3.

#### Introduction

Following review of the results of geophysical surveys conducted during the screening investigations at study areas (SA) 17, 22 & 44, ABB-ES recommended and the NTC Orlando Partnering Team (OPT) concurred that the source for several anomalies needed to be identified.

On September 6, 1996, ABB-ES employed the services of Groundwater Protection, Inc. to excavate small test pits in the areas of the anomalies to assist in identifying them. The Groundwater Protection, Inc. crew consisted of a certified backhoe operator, Kevin Pelkey and a helper, Robert Detweiler. The backhoe that Mr. Pelkey operated was a John Deere 310D backhoe.

A decontamination pad was built for decontaminating the back hoe and Investigative Derived Waste (IDW) was contained in 55-gallon drums (Photographs 1 & 2). All personnel on site were 40-hour OSHA 29 CFR 1910.120 certified and were given a health and safety briefing. At each location, the back hoe operator was instructed to remove a trench of 6 inches of soil at a time (Photograph 3). Each bucket of soil was analyzed for volatile organic vapors with a flame-ionization detector and the results recorded in a logbook (Photograph 4).

#### Study Area 44

Two anomalies were investigated at SA-44 between Building 2720 and Building 2723 at the Naval Training Center, Orlando, Orange County, Florida. Site map, Figure 1 shows the locations of the two anomalies. The area was cordoned off with caution tape to form the exclusion zone.

The first anomaly, 44TP1 was located approximately 4 feet from the southwest corner of the existing basketball court and 6 feet south of monitoring well, OLD-44-07 (Figure 1). A concrete pad was located 1 foot below level surface (bls). The pad was approximately 18 inches wide by 8 inches thick. The length of the concrete pad was not determined. The size of the excavation was approximately 8 feet wide by 10 feet long by 1 foot deep (Photographs 5). No volatile organic vapors were detected and the anomaly was identified as non-hazardous. The test pit was backfilled with the original soil (Photograph 6).

The second anomaly, 44TP2 was located approximately 10 feet southeast of monitoring well OLD-44-07 and 22 feet south of the basketball court (Figure 1). Within the first 6 inches of trenching, a three foot metal pipe, 2-inches in diameter was located (Photograph 7). The excavation continued and a concrete pad was found at 1 foot bls, resembling the concrete pad found at 44TP1. The length of the pad was not determined. The size of the excavation was approximately 5 feet by 5 feet by 1 foot deep (Photograph 8). No volatile organic vapors were detected and the anomalies were identified as non-hazardous. The test pit was backfilled with the original soil. The metal pipe was removed from the test pit, set aside and reported to the NTC Orlando Environmental Coordinator at the Public Works office.

#### Study Area 17

One large anomaly needed to be identified at SA-17 southwest of building 7191 at McCoy Annex, Naval Training Center, Orlando, Orange County, Florida. The area of excavation, shown in Figure 2, was established from the geophysical investigation grid coordinates between 930E - 970E, 870N - 910N.

The first excavation, 17TP1, began at 1000E, 850N where metal debris was found on the surface (Figure 2). The excavation was clean to a depth of 3 feet. A second excavation, 17TP1a, began at 980E, 870N, just outside the anomaly boundaries (Figure 2). The excavation was also clean to a depth of 4 feet, where the water table was encountered.

The third excavation, 17TP1b, was performed inside the anomaly boundaries at 945E, 880N (Figure 2). Methane was encountered between 1 foot of excavation and 5 feet of excavation at concentrations up to 800 parts per million (ppm). Between the depths of 3 feet and 5 feet, pieces of scrap metal and wood were

encountered (Photograph 9 & 10). The trench was approximately 6 feet long, 2 feet wide and 5 feet deep. The water table was not encountered.

Another trench within the anomaly grid system was begun to confirm that the anomaly was only scrap metal and wood. The next trench, 17TP1c, was performed at 960E, 900N (Figure 2). At a depth of 3.5 feet, large pieces of wood and metal were encountered, as well as, pieces of barbed wire. The water table poured into the trench when the bucket was pulled up from a depth of 3 - 3.5 feet. The trench was approximately 6 feet long, 2 feet wide and 3.5 feet deep (Photograph 11).

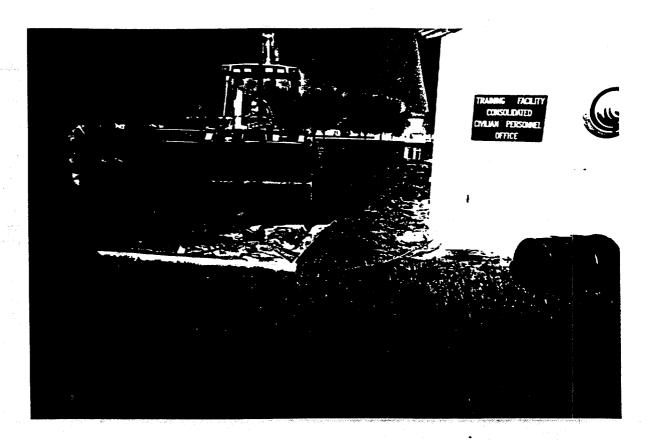
Two more trenches, 17TP1d and 17TP1e, were excavated parallel to 17TP1c, four feet on center from one another (Figure 2). At location 17TP1d and 17TP1e and at a depth of 3 feet, yellow, elliptical, 1/2 inch to 3/4 inch diameter objects were encountered in mason jars (Photograph 12 & 13). The jars appeared to be 3/4 filled and unopened. Only methane was encountered with the flame-ionization detector. Five jars were found. One jar was broken and the objects were smeared together with a clayey texture. All objects were noted and not removed from the excavation. The water table was encountered at 3 feet. All trenches were backfilled (Photograph 14) and the back hoe was decontaminated.

#### Study Area 22

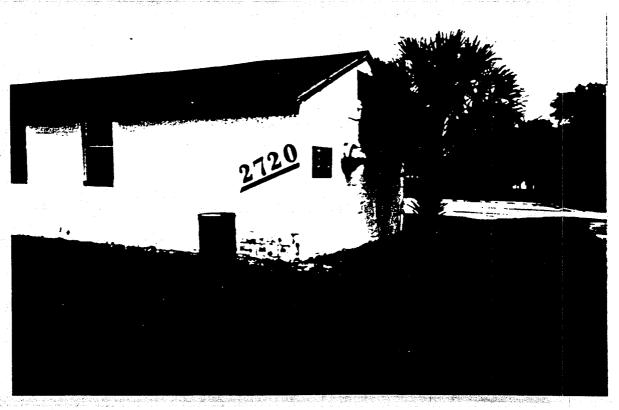
Two anomalies were investigated at SA-22 at McCoy Annex, Naval Training Center, Orlando, Orange County, Florida. The site map (Figure 3) shows the locations of the two anomalies.

The first anomaly, 22TP1, was excavated at 1070E - 1075E and 1300N from a previous geophysical investigation grid (Figure 3). The trench was 4 feet wide by 5 feet long and 4.5 feet deep (Photograph 15). The water table was encountered at approximately four feet. Remnants of an old tree were found. No volatile organic vapors were encountered and the anomaly was identified as not hazardous. Due to time restraints and dark clouds, the old tree was assumed to be the anomaly in question and the excavation was backfilled.

The second anomaly, 22TP2, was excavated at 1300E and 1300N (Figure 3). The anomaly was identified as an 8-inch diameter metal pipe (Photograph 16). The start of the pipe was at 1310E, 1280N and ran northwest into the lake edge at 1270E, 1310N. No volatile organic vapors were encountered and the anomaly was identified as not hazardous. The excavation was backfilled.



Photograph # 1: Backhoe being decontaminated.



Photograph # 2: 55-gallon drum for IDW storage.



Photograph #3: Backhoe taking 6-inch buckets of soil at a time.



Photograph # 4: Monitoring each bucket for volatile organic vapors with a flame-ionization detector and recording any readings.



Photograph # 5: Excavation 44TP1 facing North.



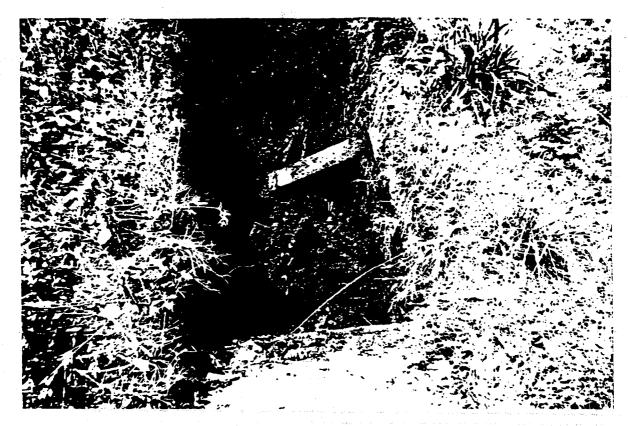
Photograph # 6: Excavation 44TP1 backfilled with original soil.



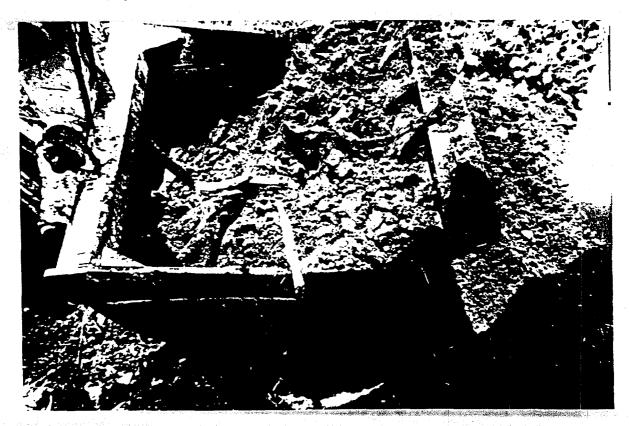
Photograph # 7: Metal pipe found at 44TP2.



Photograph #8: Concrete pad found at 44TP2.



Photograph # 9: Wood & metal debris found at SA-17.



Photograph # 10: Wood and metal debris found at SA-17.



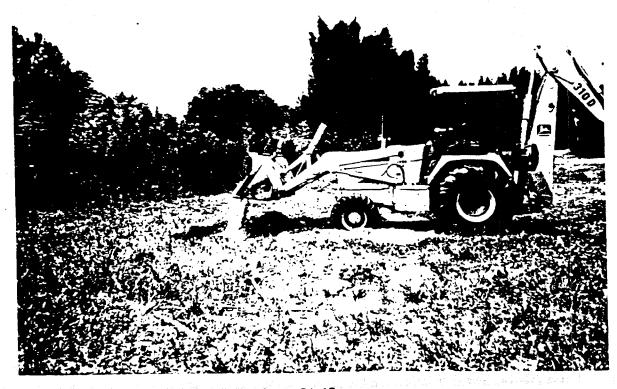
Photograph # 11: Trench 17TP1c.



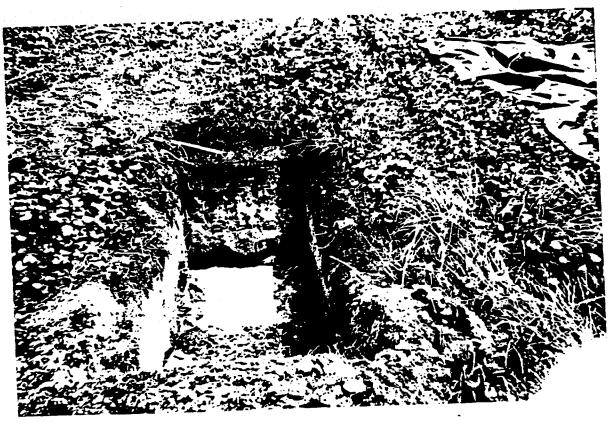
Photograph # 12: Yellow, elliptical, 1/2 inch to 3/4 inch diameter objects encountered in mason jars.



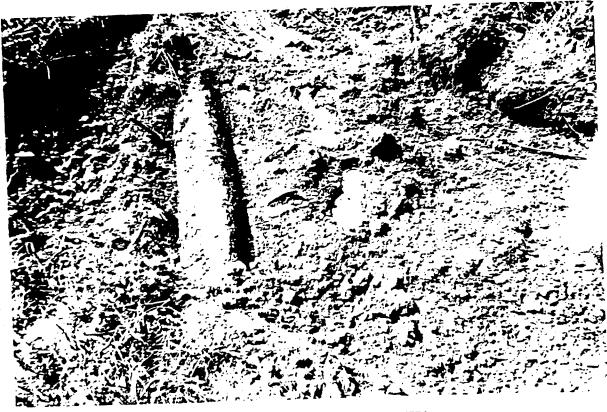
Photograph # 13: Yellow, elliptical, 1/2 inch to 3/4 inch diameter objects encountered in mason jars.



Photograph # 14: Backfilling trenches at SA-17.



Photograph # 15: Excavation at 22TP1.



Photograph # 16: Anomaly at 22TP2.

# APPENDIX F PASSIVE SOIL GAS SURVEY RESULTS

# PASSIVE SOIL GAS SURVEY

# NAVAL TRAINING CENTER ORLANDO STUDY AREAS 16, 17, 23 & 26 ORLANDO FLORIDA

#### PREPARED FOR

ABB ENVIRONMENTAL SERVICES, INC. 2590 EXECUTIVE CENTER CIRCLE E TALLAHASSEE, FLORIDA 32301

PREPARED BY

TARGET ENVIRONMENTAL SERVICES, INC.
9180 RUMSEY ROAD
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(410) 992-6622

MAY 1995

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APPENDIX C - Detectability & Terminology

#### **EXECUTIVE SUMMARY**

On April 18-23, 26, and May 1, 1995, TARGET Environmental Services, Inc. (TARGET) conducted a soil gas survey at Naval Training Center Orlando in Orlando, Florida. A total of 402 passive soil gas samples and 20 duplicates were collected from Study Areas 16, 17, 23, and 26 from depths of 2 to 3 feet. The samples were analyzed on a gas chromatograph equipped with an electron capture detector (GC/ECD) for halogenated hydrocarbons and a flame ionization detector (GC/FID) for petroleum hydrocarbons. The objective of the survey was to identify and possibly delineate the extent of volatile organic contamination within the shallow subsurface of the survey areas.

#### Study Area 16

A very low level of petroleum hydrocarbons is present at Location SG-47, but does not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 16. Chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study Area 16.

#### Study Area 17

A very low level of petroleum hydrocarbons is present at Location SG-662, but does not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 17. Chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study Area 17.

#### Study Area 23

Petroleum or chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study Area 23.

### Study Area 26

Very low levels of petroleum hydrocarbons are present at scattered locations within the survey area, but do not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 26. Chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study Area 26.

#### General

The chromatogram signatures of all the soil gas samples with detectable levels of FID hydrocarbons exhibited only small petroleum hydrocarbon peaks which were insufficient to allow chromatographic interpretation of the original contaminant product.

#### Introduction

ABB Environmental Services, Inc. (ABB) contracted TARGET Environmental Services, Inc. (TARGET) to perform a passive soil gas survey at 4 sites of the Naval Training Center Orlando in Orlando, Florida. The survey sites include Study Areas 16, 17, 23, and 26. The objective of the survey was to identify and delineate the extent of possible volatile organic contamination within the shallow subsurface these sites.

The survey sampling grids were designed by ABB, and on-site changes to the sampling plan were directed by ABB in response to site conditions encountered by TARGET during sampling. The proposed sampling plan included passive soil gas samples to be collected from the sites at depths of 2 to 3 feet and at an approximate grid spacing of 50 feet. The depth to groundwater was expected to be approximately 5 feet, but varying at some locations from 3 feet to 10 feet. The field phase of the survey was conducted on April 18-23, 26, and May 1, 1995.

#### Sample Collection and Analysis

A total of 402 passive soil gas samples and 20 duplicates were collected from the 4 survey areas at depths of 2 to 3 feet at the locations shown in Figures 1A through 1D. After multiple attempts, proposed soil gas Sample SG-512 was not installed due to impenetrable ground at that location. A detailed explanation of the sampling procedure and a copy of the passive sample installation and retrieval documentation is provided in Appendix A.

All of the samples collected during the field phase of the survey were subjected to dual analyses. One analysis was conducted according to EPA Method 8010 (modified) on a gas chromatograph equipped with an electron capture detector (ECD), and using direct injection. Specific analytes standardized for this analysis were:

1,1-dichloroethene (11DCE)
methylene chloride (CH₂Cl₂)
trans-1,2-dichloroethene (t12DCE)
1,1-dichloroethane (11DCA)
cis-1,2-dichloroethene (c12DCE)
chloroform (CHCl₃)
1,1,1-trichloroethane (111TCA)
carbon tetrachloride (CCl₄)
trichloroethene (TCE)
1,1,2-trichloroethane (112TCA)
tetrachloroethene (PCE)

The chlorinated hydrocarbons in this suite were chosen because of their common usage in industrial solvents, and/or their degradational relationship to commonly used compounds.

The second analysis was conducted according to EPA Method 8020 (modified) on a gas chromatograph equipped with a flame ionization detector (FID), and using direct injection. The analytes selected for standardization in this analysis were:

benzene
toluene
ethylbenzene
meta- and para- xylene
ortho- xylene

These compounds were chosen because of their utility in evaluating the presence of fuel products, or petroleum based solvents. An explanation of the laboratory procedures is provided in Appendix B.

The tabulated results of the laboratory analyses of the soil gas samples are reported in micrograms per liter-vapor (µg/l-v) in Tables 1 and 2. Although "micrograms per liter" is equivalent to "parts per billion (volume/volume)" in water analyses, they are not equivalent in gas analyses, due to the difference in the mass of equal volumes of water and gas matrices. The xylenes concentrations reported in Table 1 are the sum of the m- and p-xylene and the o-xylene concentrations for each sample. With TARGET's analytical run conditions, 11DCE/TCTFA and

CCl₄/12DCA occur as co-eluting pairs and are reported in Table 2 in concentrations of 11DCE and CCl₄, respectively. The reporting limit for 11DCE was raised to 10 µg/l due to an artifact of the laboratory which was consistent for the batches of samples analyzed for this survey.

#### Quality Assurance/Quality Control (QA/QC) Evaluation

#### Field OA/OC Samples

Each trip blank consisted of a vial prepared for passive sampling enclosed in a heat-sealed aluminum pouch and was kept with the remaining undeployed passive sampling vials during each day's field activities until being opened, capped on-site and transported with a batch of samples to the laboratory. Equipment blanks were prepared at the start of each installation day's activities by removing a vial from its pouch and placing it within a PVC holding device. The holding device was wrapped in aluminum foil until the end of the day, when the vial was removed from the device, capped on-site and transported to the laboratory. Field duplicate samples were installed in the ground within a 1' lateral radius of every twentieth field sample. The laboratory results for all of these QA/QC samples are reported in Tables 1 and 2. Low level concentrations of petroleum hydrocarbons from an unknown source were detected in several of the field control blanks and trip blanks. In order to compensate for this blank contamination, the reporting limits for toluene, ethylbenzene and xylenes were raised (to levels above those detected in the blanks, see Table 1) for all of the soil gas samples collected during the survey.

#### Laboratory QA/QC Samples

To document analytical repeatability, a duplicate laboratory analysis was performed on every tenth field sample. Laboratory blanks of nitrogen gas were also analyzed after every tenth field

sample. The results of these analyses are reported in Tables 1 and 2. Concentrations of all analytes were below the reporting limit in all laboratory blanks.

#### Results and Interpretation

In order to provide graphic presentation of the results, selected individual data sets in Table 1 have been mapped and contoured to produce Figures 2 through 7. Dashed contours are used where patterns are extrapolated into areas of less complete data, or as auxiliary contours. Map sample points with no data shown indicate that the analyte concentrations in the sample were below the reporting limit. The survey results for each study area are discussed separately below. An explanation of the terminology used in this report is provided in Appendix C.

#### Study Area 16

GC/FID analysis of the soil gas samples collected from this area revealed a very low level of Total FID Volatiles as Naphtha (Figure 2) in Sample SG-47, which was collected at the southern end of the fuel island. Samples SG-47 also contained a very low level of benzene (Figure 3). None of the remaining FID analytes were present above their respective reporting limits in any of the soil gas samples from Study Area 16. The FID chromatogram signature of Sample SG-47 exhibits a pattern of small peaks representing very low levels of petroleum hydrocarbons and is otherwise insufficient to allow chromatographic interpretation of the original product. The very low level of volatile hydrocarbons observed at this one location does not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 16.

GC/ECD analysis revealed that none of the standardized chlorinated compounds were present above their respective reporting limits in any of the soil gas samples from Study Area 16.

#### Study Area 17

GC/FID analysis of the soil gas samples collected from this area revealed a very low level of Benzene (Figure 4) in Sample SG-662, which was collected at the northwestern corner of the survey area. Samples SG-662 also contained a low level of toluene (Figure 5). None of the remaining FID analytes were present above their respective reporting limits in any of the soil gas samples from Study Area 17. The FID chromatogram signature of Sample SG-662 exhibits a only a few small peaks representing a very low level of petroleum hydrocarbons and is otherwise insufficient to allow chromatographic interpretation of the original product. The very low level of volatile hydrocarbons observed at this one location does not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 17.

GC/ECD analysis revealed that none of the standardized chlorinated compounds were present above their respective reporting limits in any of the soil gas samples from Study Area 17.

Study Area 23

GC/FID analysis of the soil gas samples collected from this area revealed that none of the standardized petroleum compounds were present above their respective reporting limits in any of the soil gas samples from Study Area 23.

GC/ECD analysis revealed that none of the standardized chlorinated compounds were present above their respective reporting limits in any of the soil gas samples from Study Area 23.

#### Study Area 26

GC/FID analysis of the soil gas samples revealed very low levels of Benzene (Figure 6) in a few samples from the northeastern end of the survey area and at 3 isolated locations toward the southwestern end of the area. Toluene (Figure 7) was present in low concentrations at several

scattered locations across the survey area. A low level of ethylbenzene occurred only in Sample SG-618, while xylenes were present only in Sample SG-641. Total FID as Naphtha was below the reporting limit for all of the soil gas samples collected in Study Area 26. The FID chromatogram signatures of the samples with detectable levels of volatiles revealed only very small peaks representing very low levels of petroleum hydrocarbons which are insufficient to allow chromatographic interpretation of the original product. The very low levels of volatile hydrocarbons observed at scattered locations at this site do not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 26.

GC/ECD analysis revealed that none of the standardized chlorinated compounds were present above their respective reporting limits in any of the passive soil gas samples collected from Study Area 26.

#### Conclusions

#### Study Area 16

- A very low level of petroleum hydrocarbons is present at Location SG-47, but does not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 16.
- Chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study
   Area 16.

#### Study Area 17

- A very low level of petroleum hydrocarbons is present at Location SG-662, but does not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 17.
- Chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study Area 17.

#### Study Area 23

Petroleum or chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study Area 23.

#### Study Area 26

- Very low levels of petroleum hydrocarbons are present at scattered locations, but do not suggest the presence of a significant petroleum hydrocarbon contamination problem in the shallow subsurface of Study Area 26.
- Chlorinated hydrocarbon contamination was not evident in the shallow subsurface of Study

  Area 26.

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SC-662 SC-661 SC-660 SC-659 SC-658 SC-380 SC-381 SC-382 SC-383 SC-384 SC-385 SC-386 SC-387 SC-388 SC-389 SC-390 SC-391 SC-392

SC-198 SC-197 SC-196 SC-195 SC-194 SC-193 SC-416 SC-413 SC-417 SC-411 SC-409 SC-408 SC-405 SC-404 SC-403 SC-404 SC-395 SC-394 SC-393

• SC-663 • SC-665 • SC-200 • SC-199 • SC-415 • SC-414 • SC-418 • SC-418 • SC-410 • SC-407 • SC-406 • SC-402 • SC-400 • SC-399 • SC-398 • SC-397 • SC-396

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AREA



FIGURE 1B. Sample Locations

. SOIL GAS SAMPLE LOCATION



This map is integral to a written report and should be viewed in that context.

STUDY AREA 17 NAVAL TRAINING CENTER ORLANDO ORLANDO, FLORIDA

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FIGURE 4. Benzene (µg/I)

SOIL GAS SAMPLE LOCATION



This map is integral to a written report and should be viewed in that context.

STUDY AREA 17 NAVAL TRAINING CENTER ORLANDO ORLANDO, FLORIDA 

FIGURE 5. Toluene (µg/l)

. SOIL GAS SAMPLE LOCATION



This map is integral to a written report and should be viewed in that context.

STUDY AREA 17 NAVAL TRAINING CENTER ORLANDO ORLANDO, FLORIDA

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## **APPENDIX G**

CONE PENETROMETER TESTING RESULTS, GROUNDWATER EVALUATION





April 17, 1998 Report Number 0304-1023 6105 Rookin Houston, TX 77074 Phone: 713-778-5580

Fax : 713-778-5501

ABB Environmental Services, Inc. 1080 Woodcock Road, Suite 100 St. Paul Building Orlando, FL 32803

Attention:

Mr. Greg Mudd

DRAFT REPORT
DIRECT PUSH TECHNOLOGY SERVICES
STUDY AREA 17
McCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA
SUBCONTRACT AGREEMENT NO. SE8-21-002G

Dear Mr. Mudd:

Please find enclosed herewith the draft results of the cone penetration tests conducted at the above referenced location. All tests were conducted in accordance with ASTM Standard D5778-95 and supervised by ABB Environmental Services field personnel.

Testing was done with a 15 cm² piezocone penetrometer tip which was hydraulically advanced into the soil at a rate of 2 cm per second. Each of the cone penetration test results were displayed on an analog strip chart and stored in digital format on a computer diskette. A total of nine cone penetration tests and one dissipation test were completed. The results of these tests are presented in Section 1 of this report.

For your information, the soil stratigraphy was identified using Campanella and Robertson's Simplified Soil Behavior Chart. Please note that because of the empirical nature of the soil behavior chart, the soil identification should be verified locally.

Groundwater sampling was conducted using Fugro's Hydro-Trap Sampler. The sampler is advanced to the desired interval where the sealed sample chamber is opened. After the sample chamber is filled, the sampler is pulled to the surface where the sample is decanted into containers provided by our client. A total of 82 samples were collected at the locations indicated in the daily logs which are included in Section 2.

Fugro Geosciences appreciates the opportunity to be of service to your organization. If you should have any questions, or if we can be of further assistance, please do not hesitate to contact us. We look forward to working with you in the future.

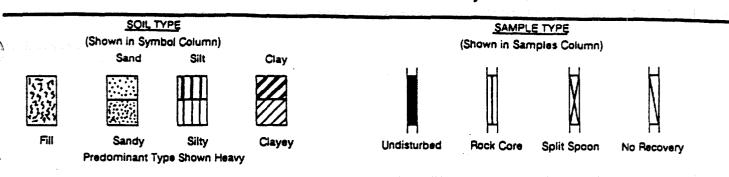
Very truly yours, FUGRO GEOSCIENCES, INC.

Recep Yilmaz President

RY/mw 1 Diskette Enclosed

A member of the Fugro group of companies with offices throughout the world.

# Key To Soil Classification and Symbols



## TERMS DESCRIBING CONSISTENCY OR CONDITION

# COARSE GRAINED SOILS (Major portion Retained on No. 200 Sieve)

Includes (1) clean gravels and sand described as fine, medium or course, depending on distribution of grain sizes (2) silty or clayey gravels and sands and (3) fine grained low plasticity soils (PI < 10) such as sandy silts. Condition is rated according to relative density, as determined by lab tests or estimated from resistance to sampler penetration.

Descriptive Term	Penetration Resistance*	Relative Density
Loose	0 - 10	0 to 40%
Medium Dense	10 - 30	40 to 70%
Dense	30 - 50	70 to 90%
Very Dense	Civer 50	90 to 100%

^{*} Blows/Foot, 140# Hammer, 30" Drop

#### FINE GRAINED SOILS (Major Portion Passing No. 200 Sieve)

Includes (1) inorganic and organic silts and clays, (2) sandy, gravelly or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests for soils with PI > 10.

Descriptive	Cohesive Shear Strength
Term	Tons/Square Foot
Very Soft	Less Than 0.125
Soft	0.125 to 0.25
Firm	0.25 to 0.50
Stiff	0.50 to 1.00
Very Stiff	1.00 to 2.00
Hard	2.00 and Higher

Note: Slickensided and fissured day may have lower unconfined compressive strengths than shown above because of planes of weakness or shrinkage cracks; consistency ratings of such soils are based on hand penetrometer readings.

Flocculated:

Slickensided:

Degree of Slickensided Development

### TERMS CHARACTERIZING SOIL STRUCTURE

paper thin in size

Parting:

Poorly Graded:

Seam:	1/8" to 3" thick		
Layer:	greater than 3°		
Fissured:	containing shrinkage cracks, frequently filled with		
	fine sand or silt, usually more or less vertical		
Sensitive:	pertaining to cohesive soils that are subject to appreciable loss of strength when remoided		
interbedded:	composed of alternate layers of different soil types		
Laminated:	composed of thin layers of varying color and texture		
Calcareous:	containing appreciable quantities of calcium carbonate		
Well Graded:	having wide range in grain sizes and substantial		

amounts of all intermediate particle sizes

predominantly of one grain size, or having a

range of sizes with some intermediate size miss-

Slightly Slickensided:

Slickensides present at intervals of 1' to 2', soil does not easily break along these plates

Moderately Slickensided:

Extremely Slickensided:

Slickensides spaced at intervals of 1' to 2', soil breaks easily along these planes continuous and interconnected slickensides spaced at intervals of 4" to 12', soil breaks along the slickensides into

knit or flakey structure

slick and glossy in appearance.

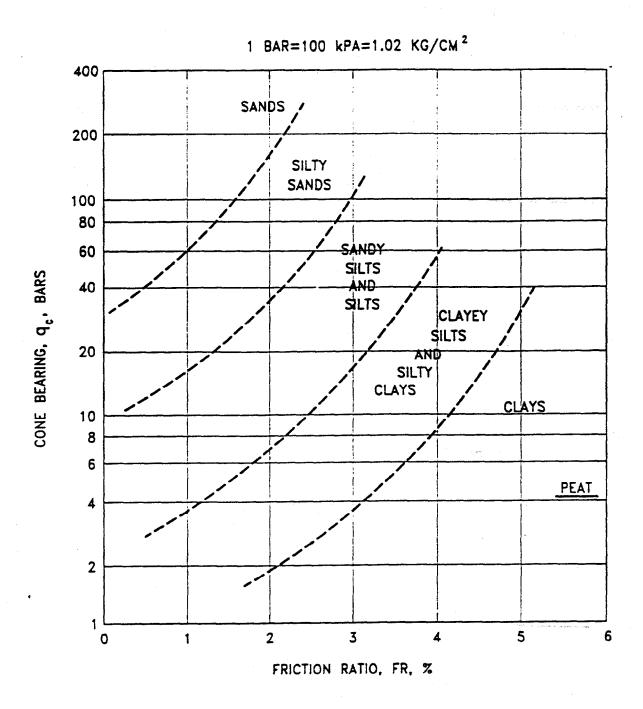
pieces 3" to 6" In size
Intensely Slickensided:

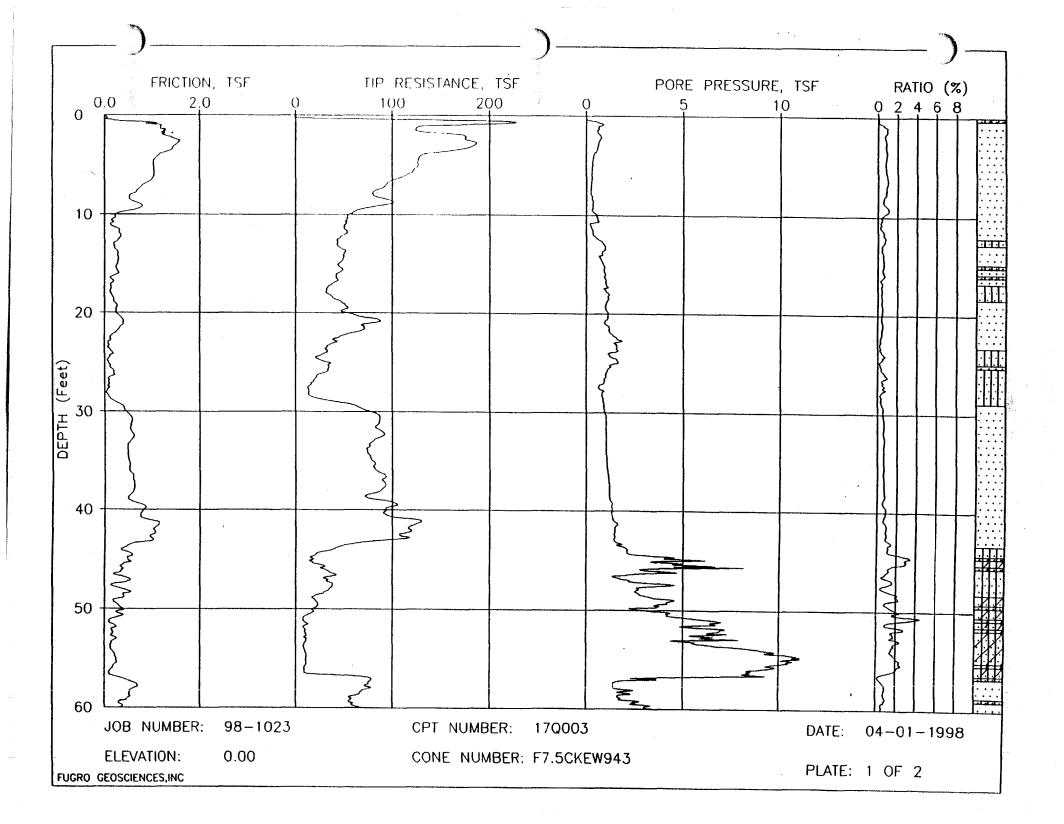
slickensides spaced at intervals of less
than 4", continuous in all directions; soil
breaks down along planes into nodules

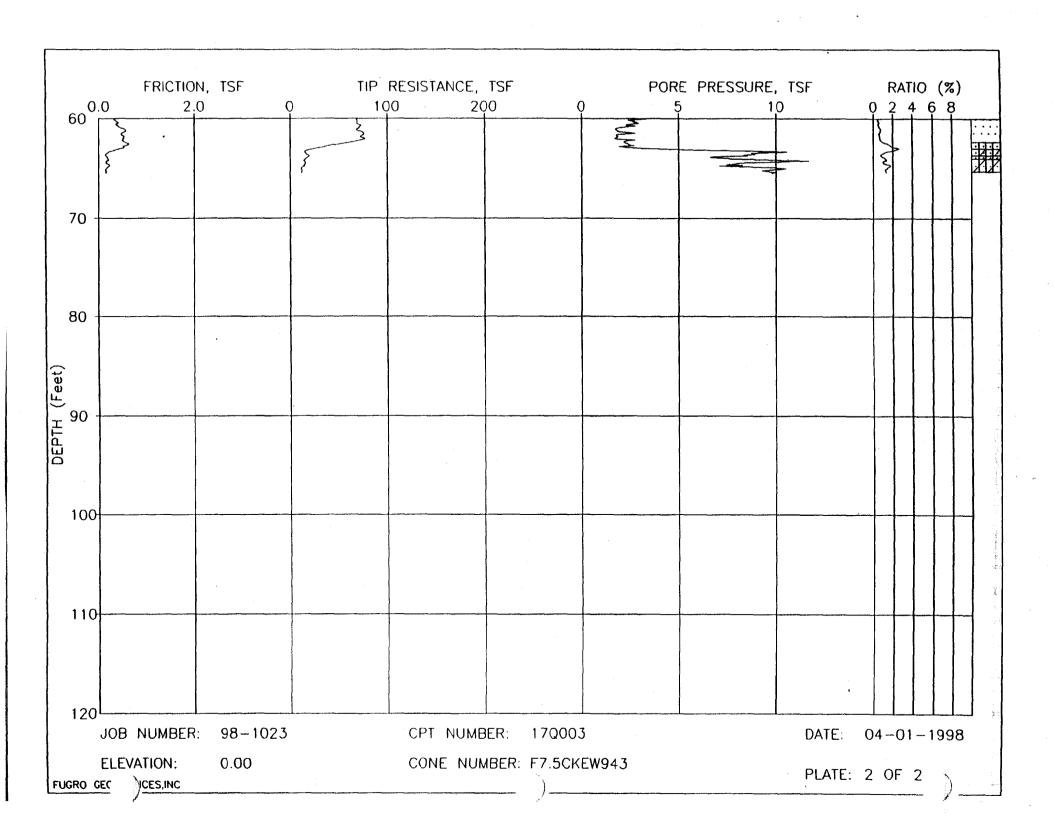
1/4" to 2" in size.

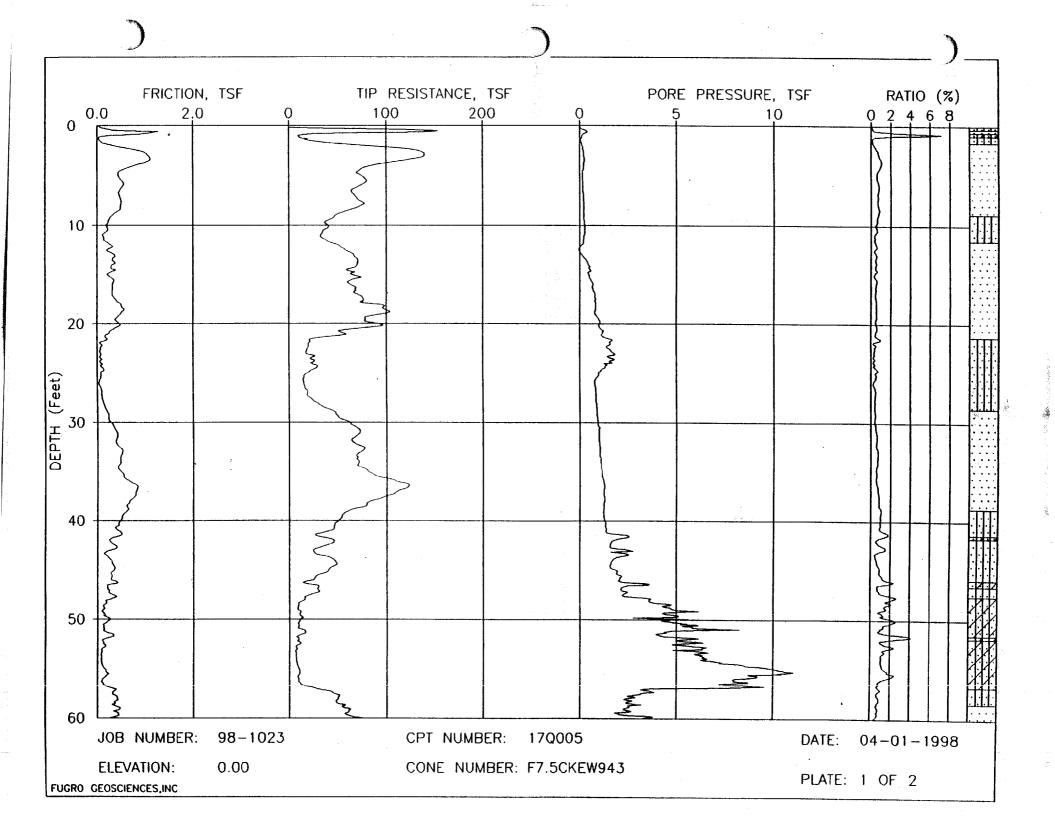
pertaining to cohesive soils that exhibit a loose

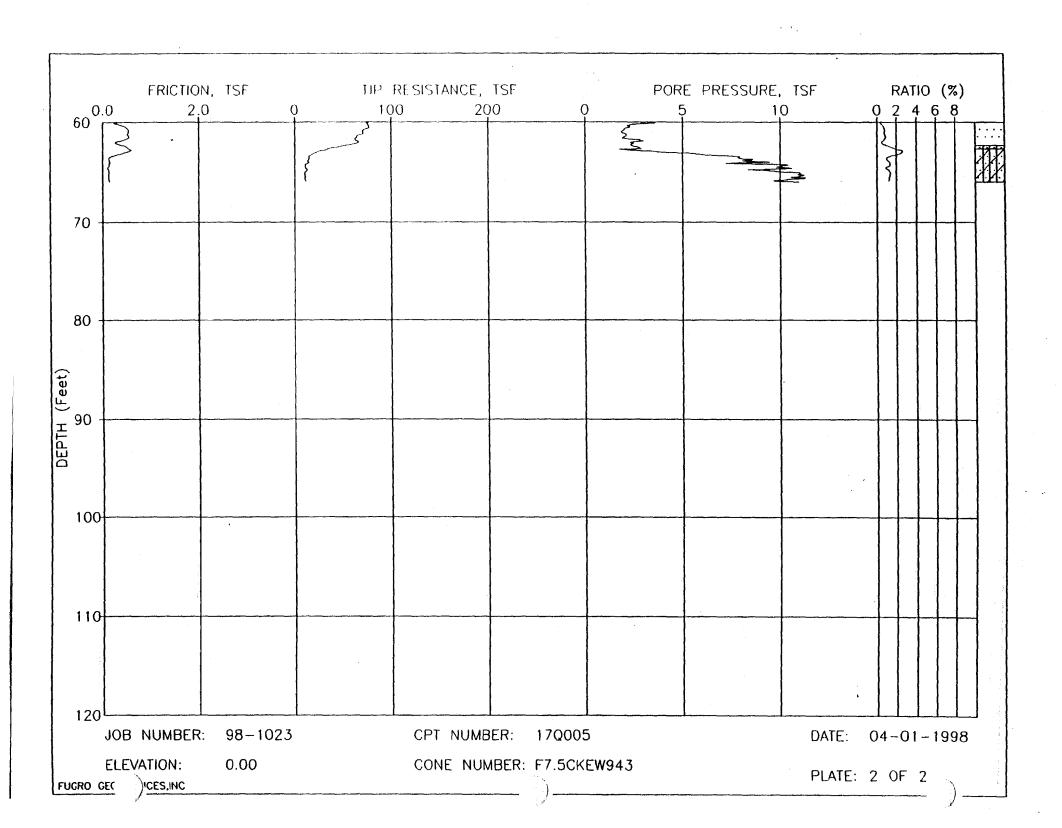
having inclined planes of weakness that are

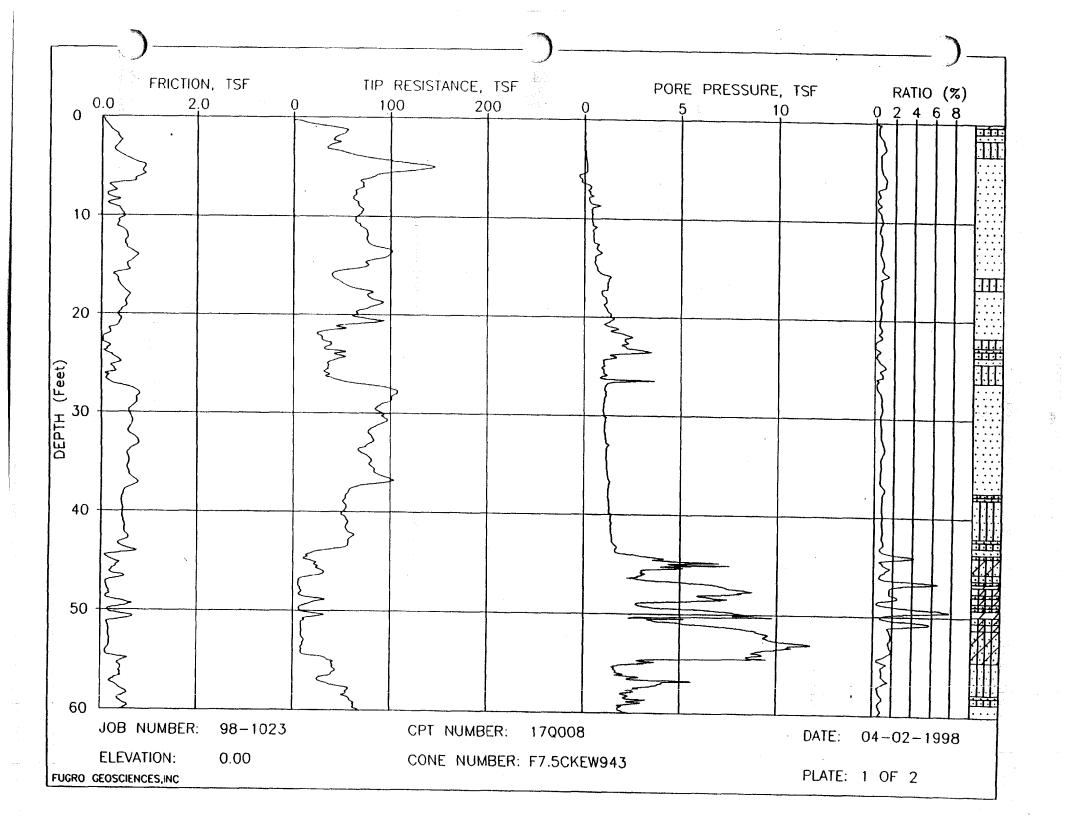


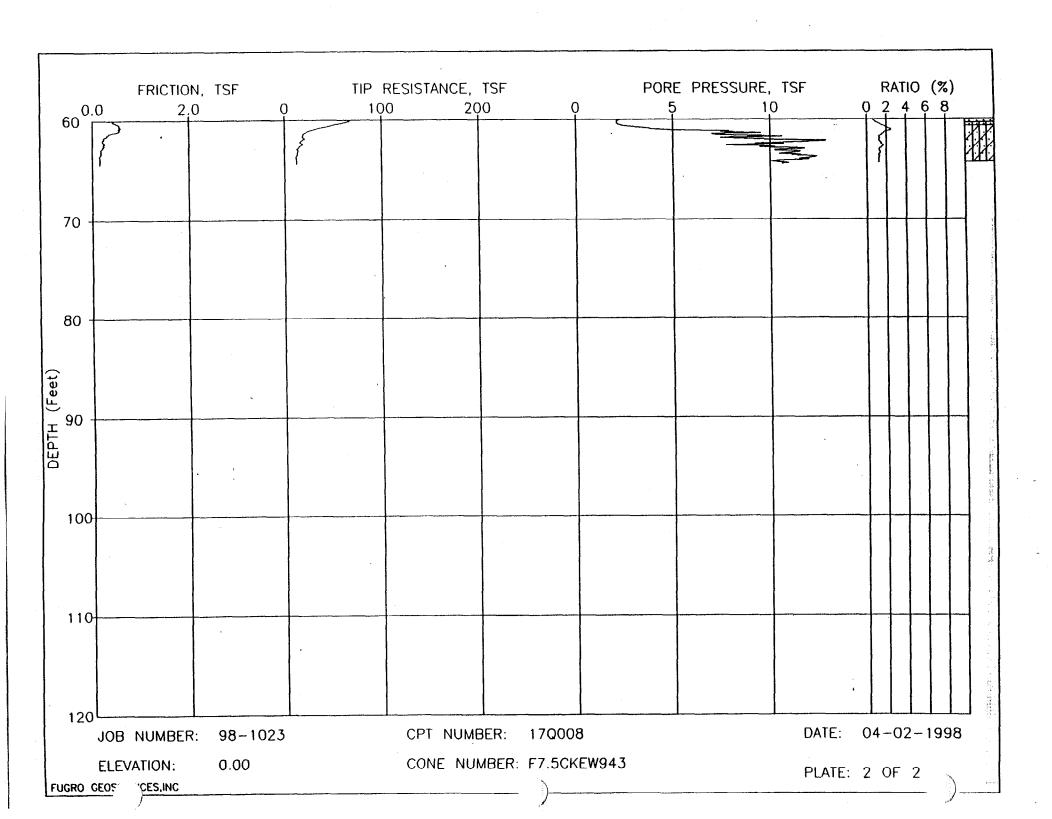


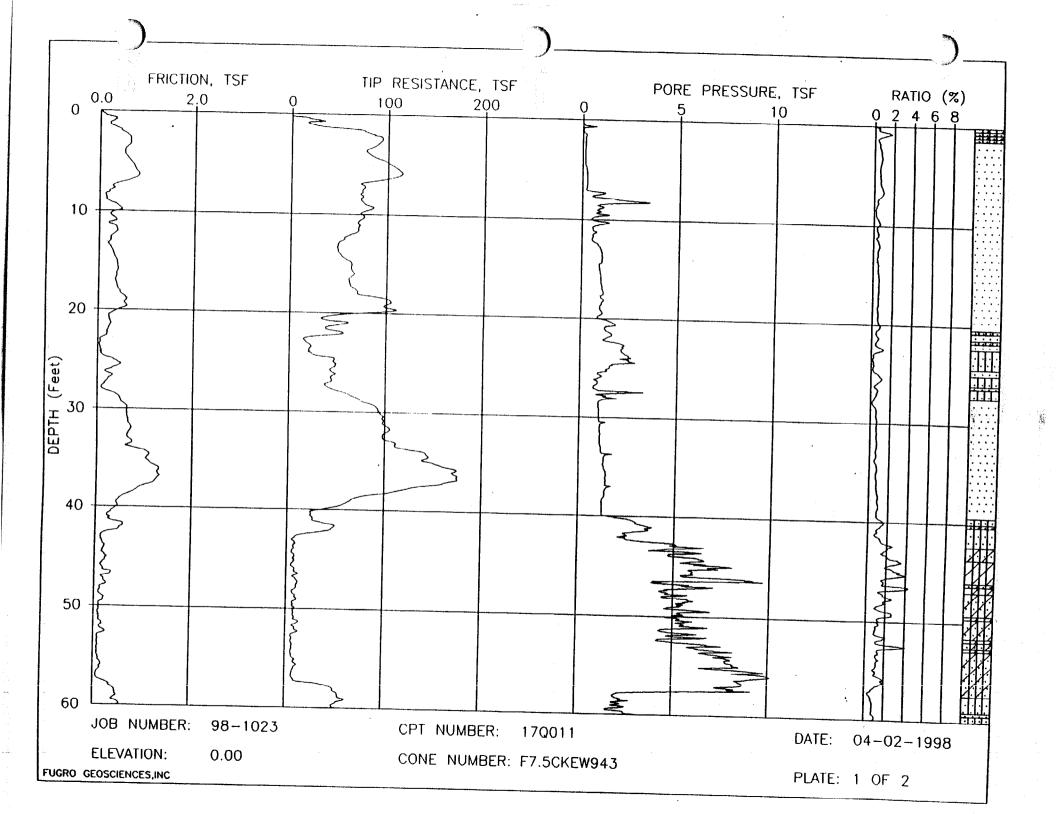


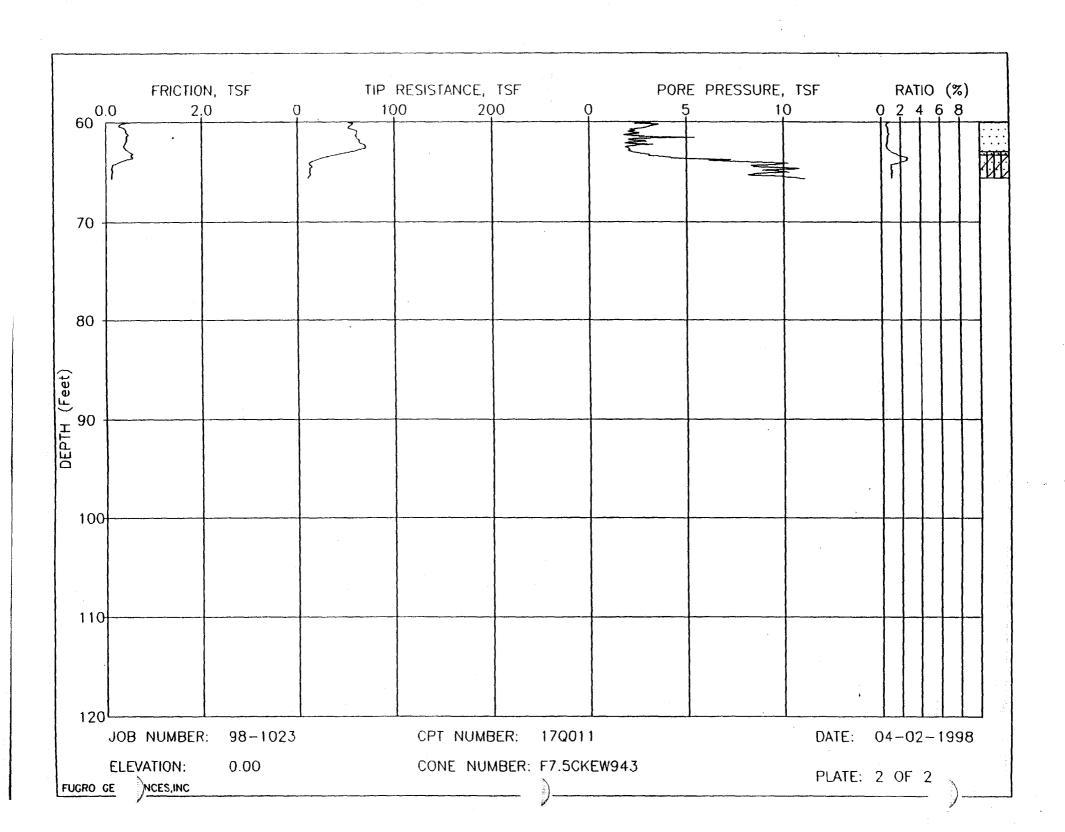


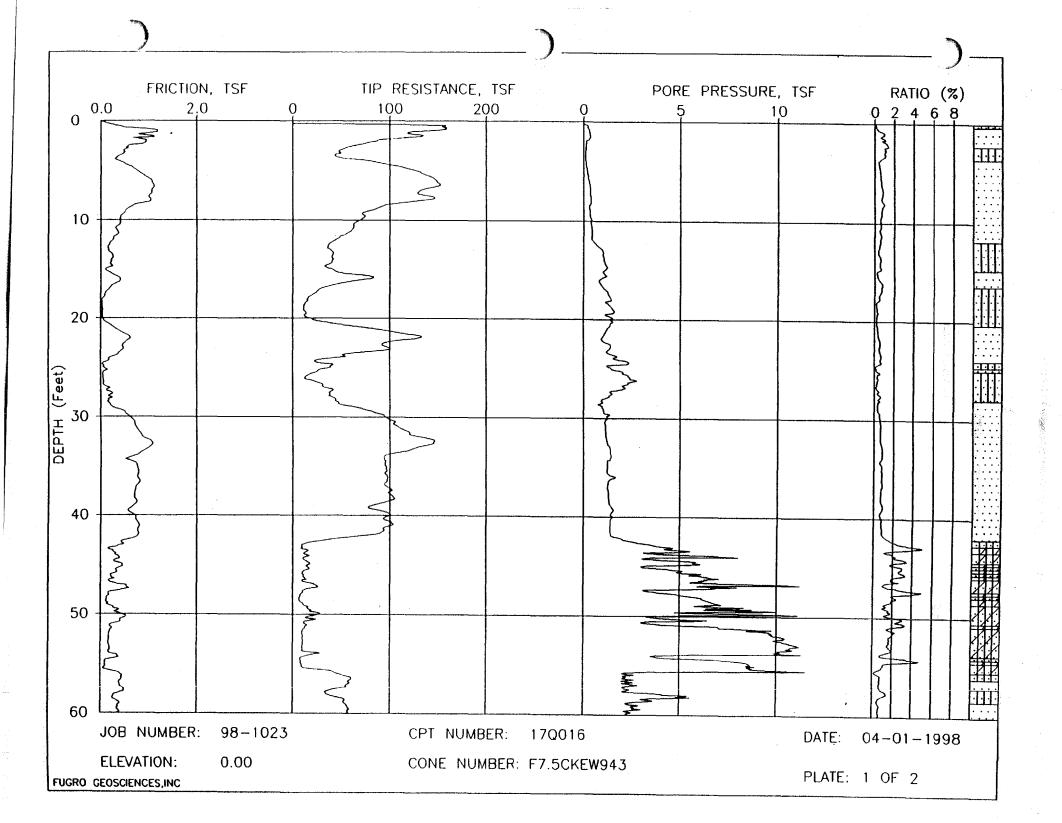


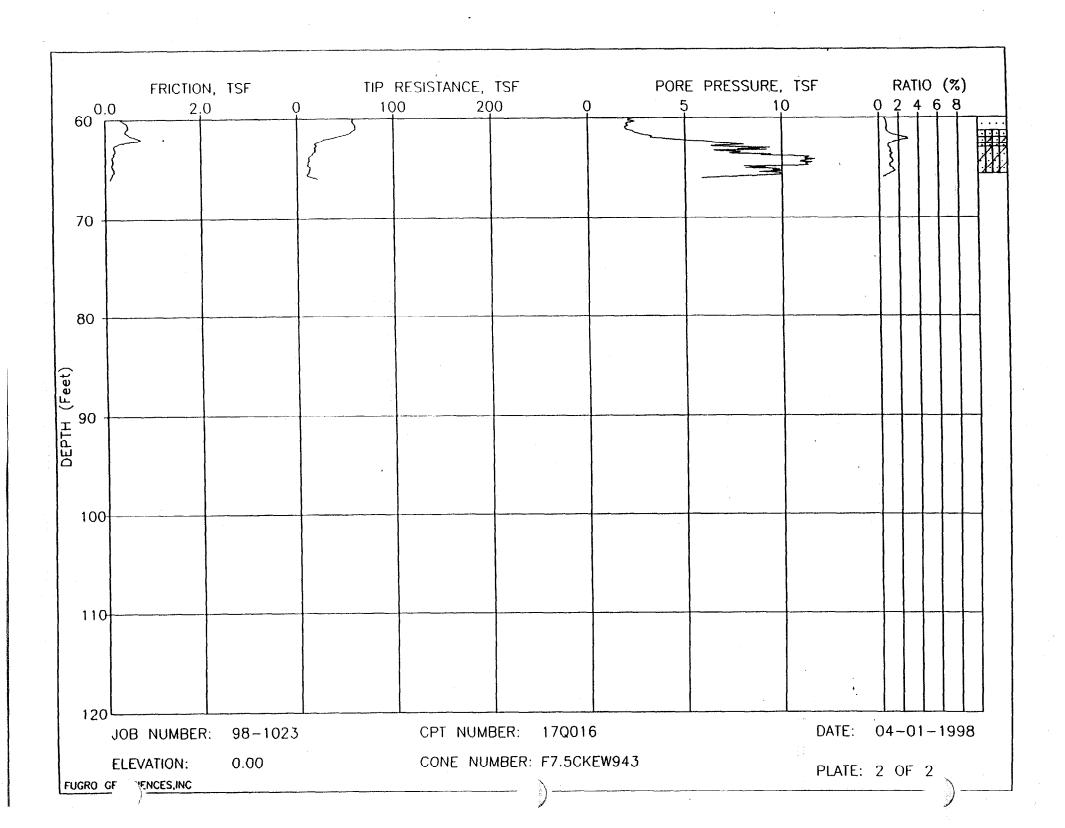


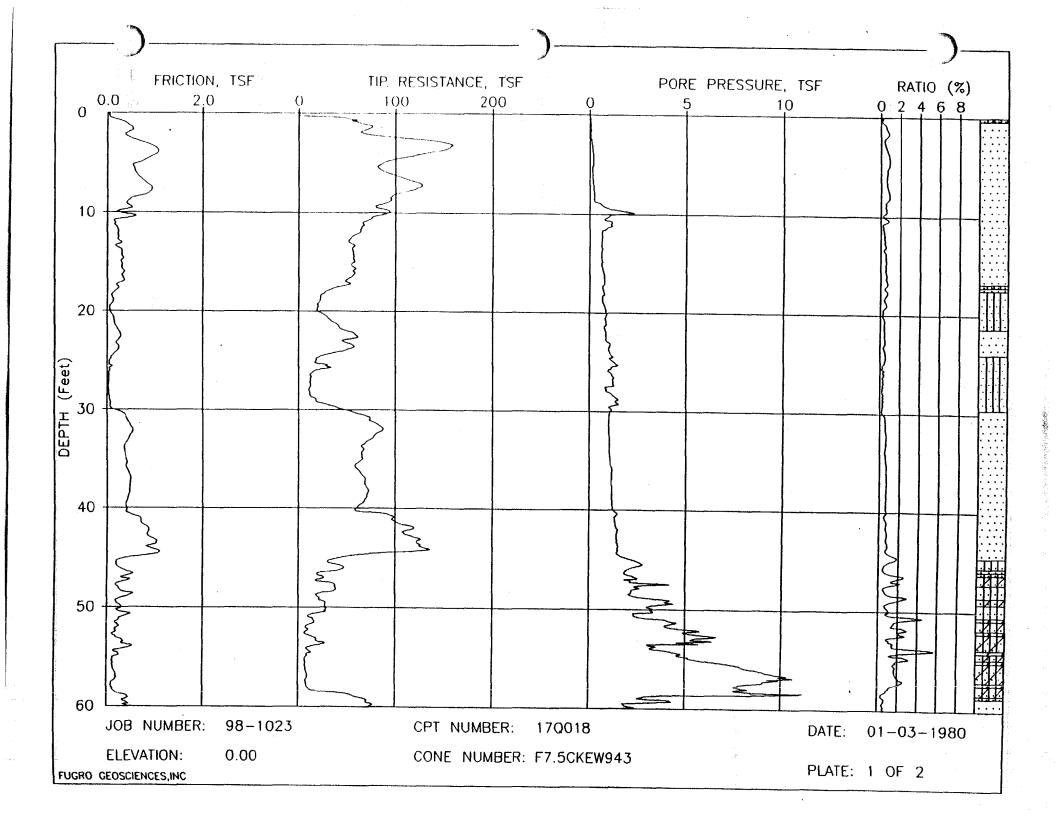


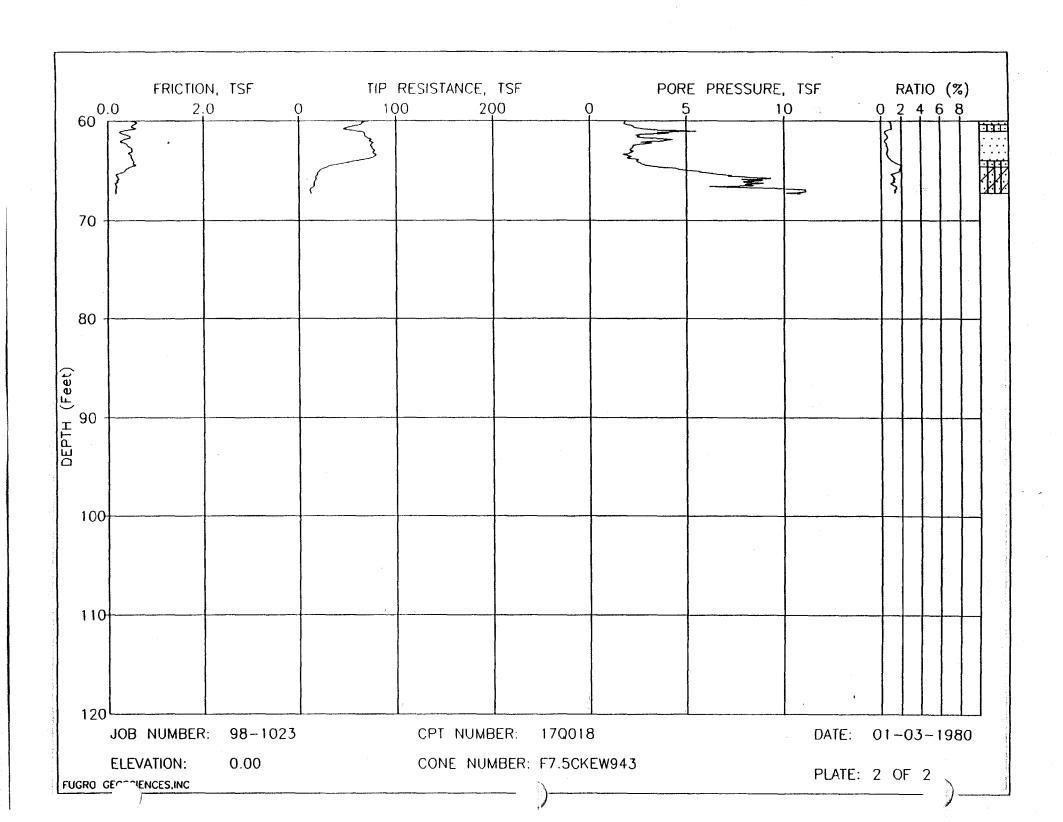


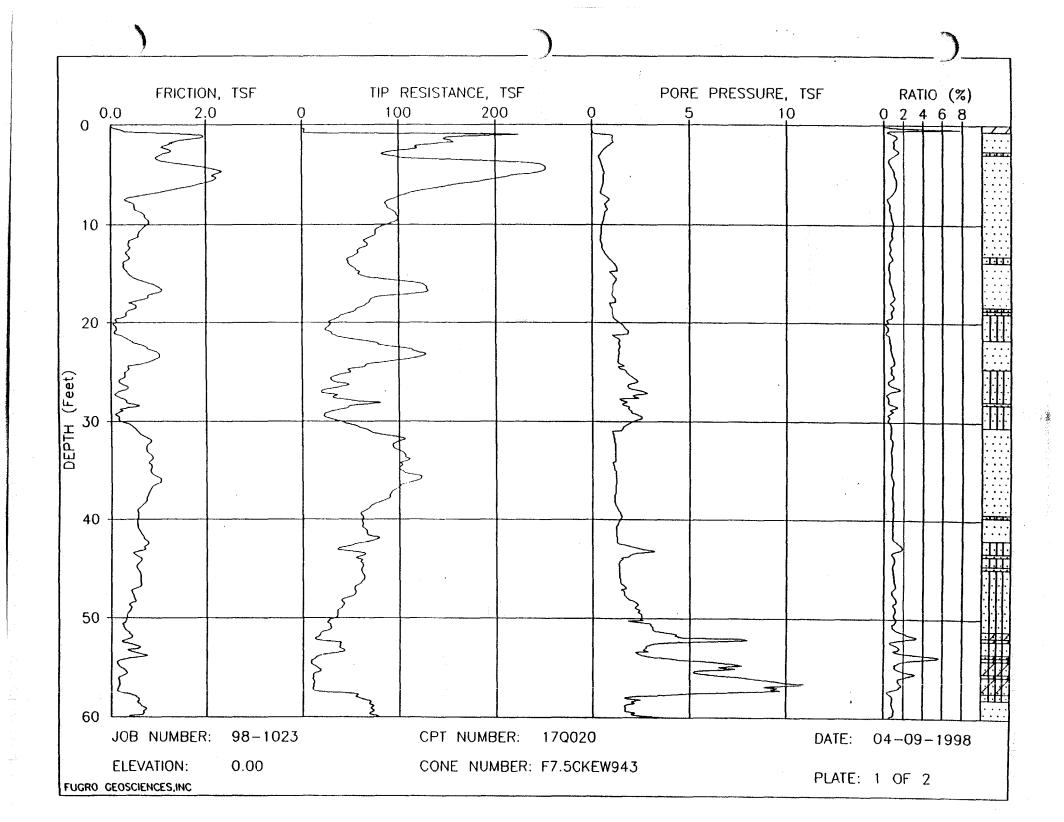


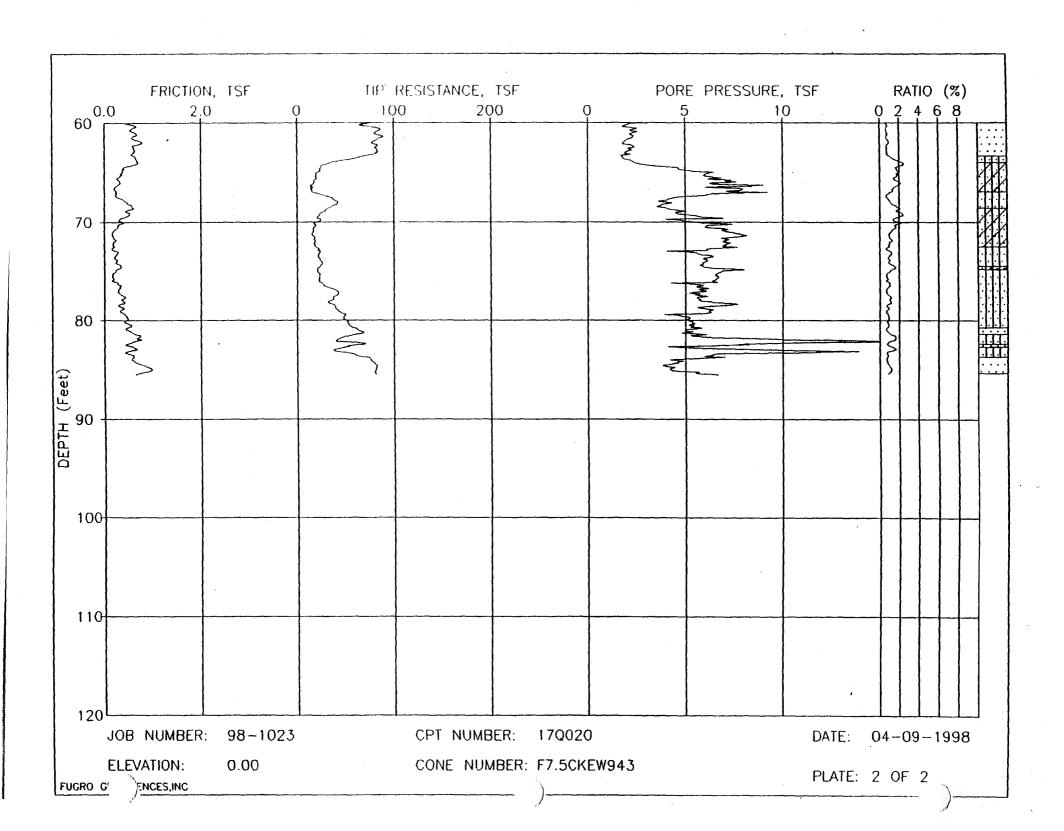


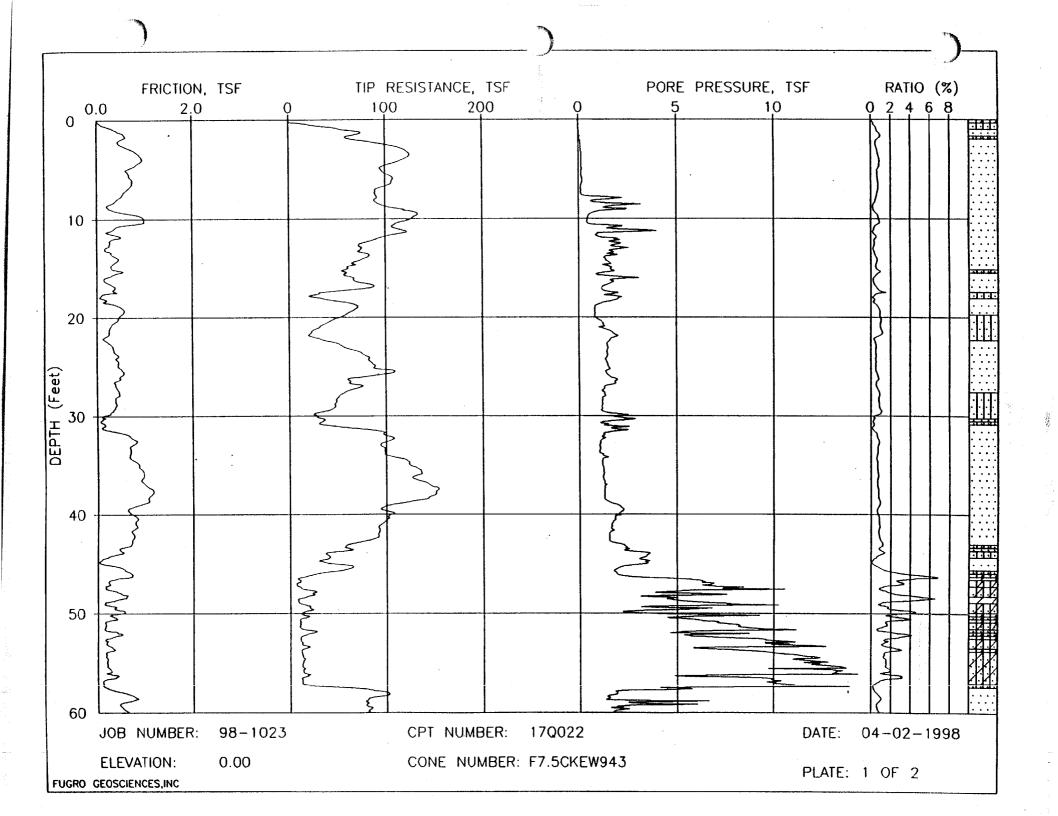


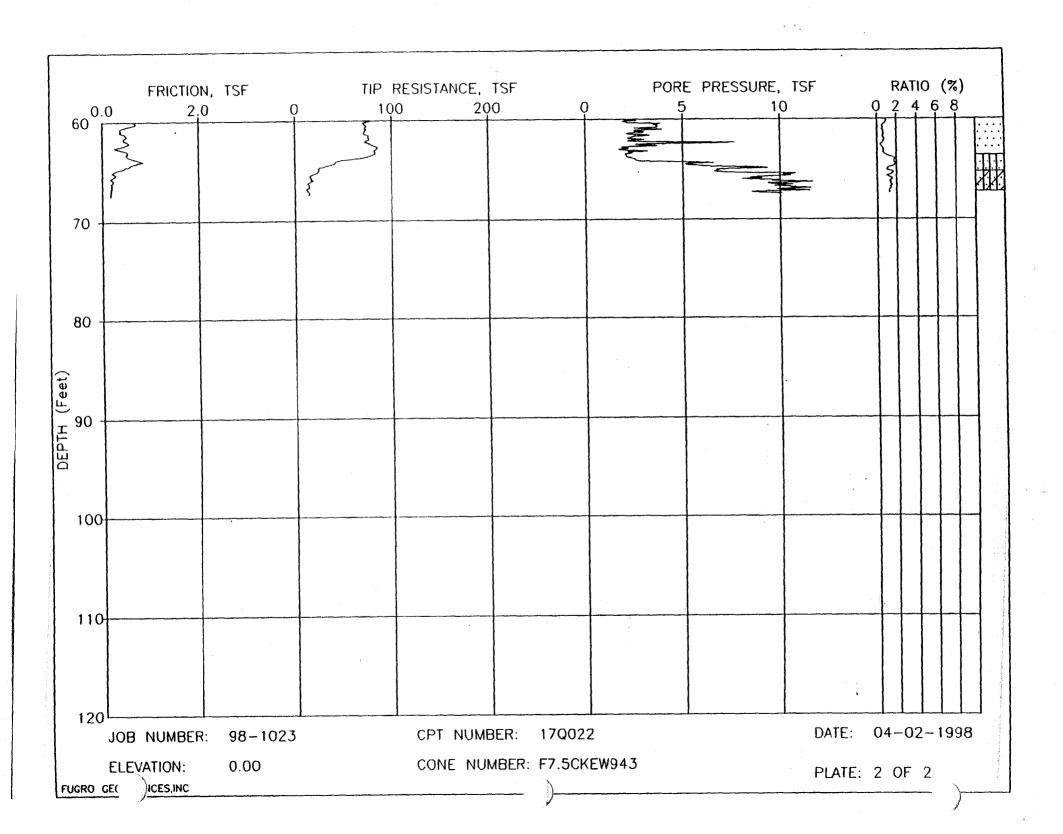


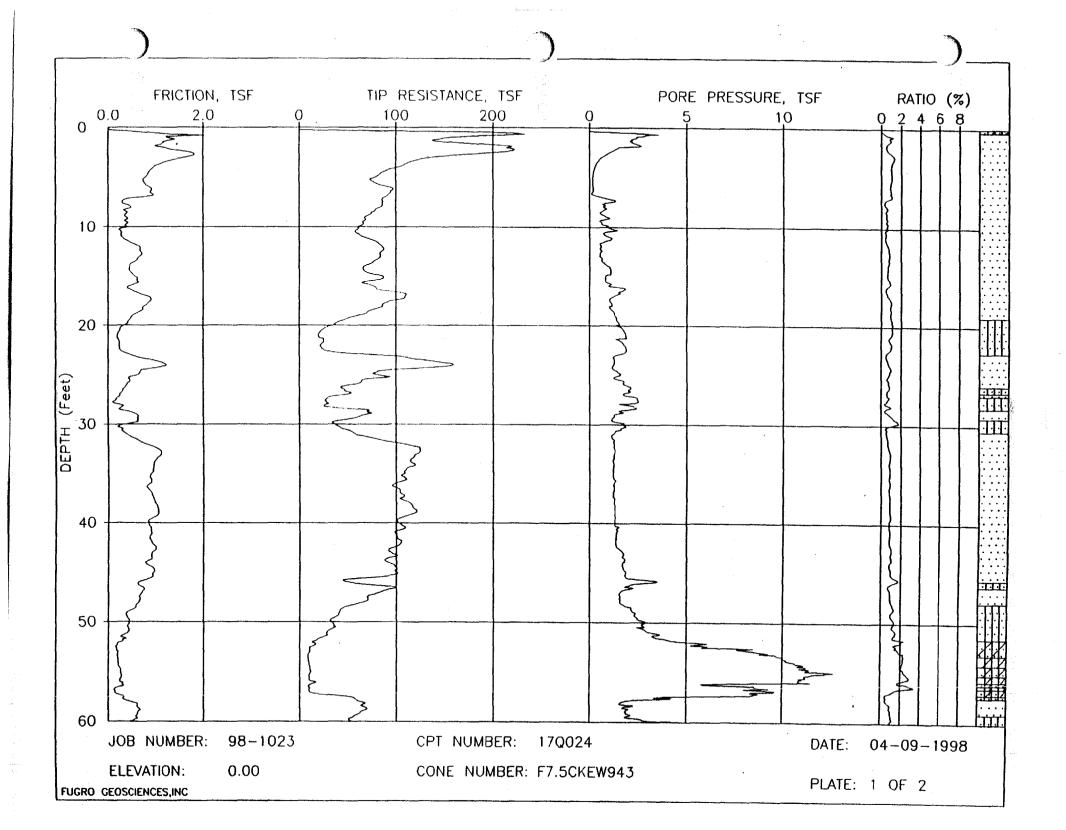


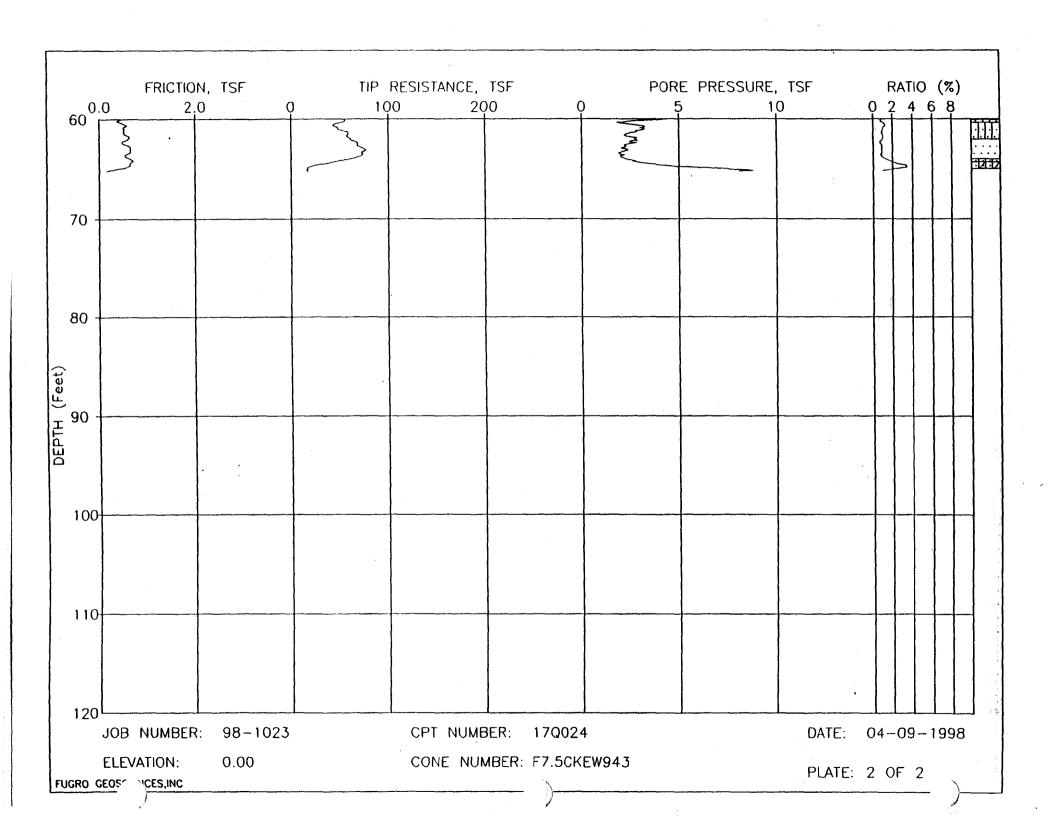


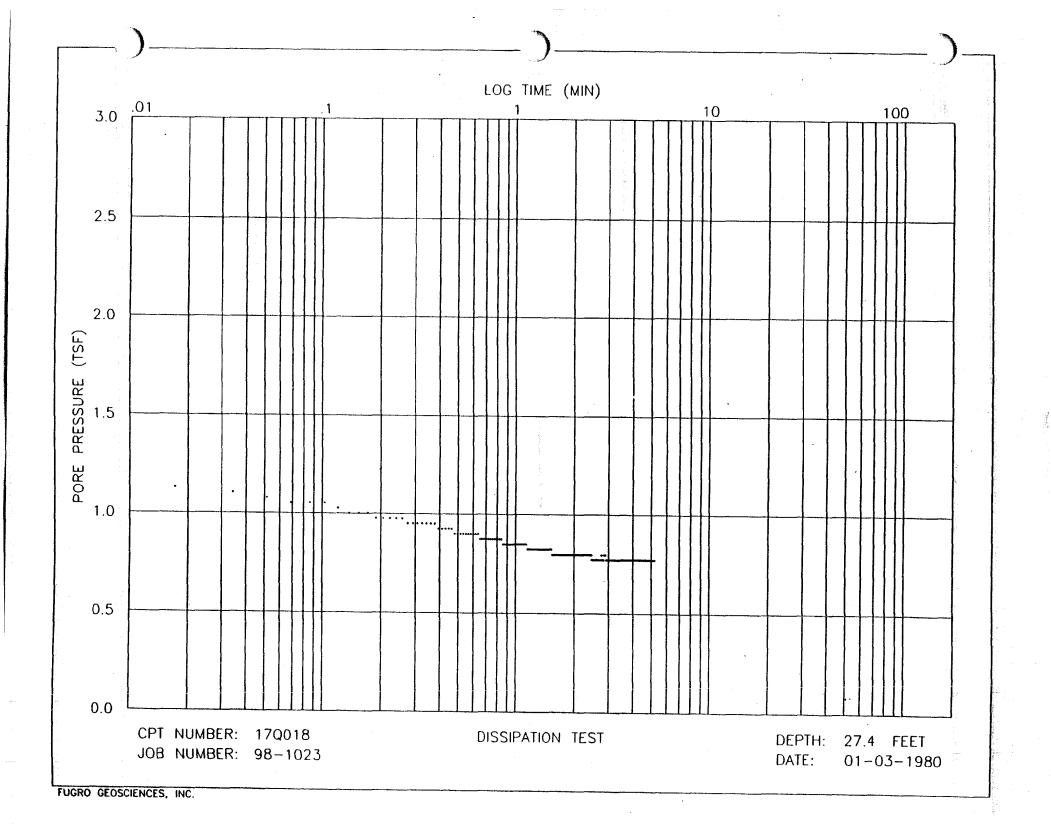












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- Ope. 210. 5 Community						
Operators Comments_	Grant	ZCPTS	to 42 Ft	and	ZCPT5	10 75F

**Daily Totals** 

Payroll Hrs: (Operator ) (Helper

265.9

Operators Signature Albert Fennes Client Approval May Traken

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FUGRO GEOSCIENCES, II
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		Client Job. No. / Description NTC	ORIGADE	FIO.	
,3de	or Fu	gro Job. No. 0301-1003 Description NTC	MCCoy	ANNE	× -
PERSONNE	L:				
perator. A	llbert	Helper: Doniel & John Date:	4/3/98	-	
<del></del>			. • .	• 	
QUIPMENT					
Cone Rig:	5040	Grout Truck: 5061 Pick-Up: 13096	Decon Unit:	<del>no</del>	<del>"</del>
Client Conta	a: ABi	MILEAGE: Start: Finish: _	. c. we	Total:	
DAILY AC	TIVITY			HOURLY	MOVING
FROM	TO	ACTIVITY	FOOTAGE	WORK	STANDS
1			(FEET)	(MIN.)	(MIN.)
7:00	2:00	Standay	35'		
8:00		(1)0+85 Sample 170004:06	-		
	9:40	(try twice)	40'		
9:40	10:15	Sample 17000406	45'		
10:15	10:45		50'		
10:45	11:50	Sample 17@00406	55'		Γ
11:50	12:10				
12:10	1:10	Con. Somple at 55			
1:10	1:30	Sample 17 000406	60'		
1:30	3:40	Decon			
3:40	3:30	Grater Sample 1700	40'		
3:30	4:45	Sample 1790	50'		
4:10	5:00	sample 1700	60'		
5:30	6:30	Grout			
<u> </u>	V. GC_	to provide the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the s			
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Payrol Hours:	(Operator	) (Helper ) Daily Totals	435		
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Operators	Comments	Sample Holes granted to 40 er	· · · · · · · · · · · · · · · · · · ·		
		(Grout total 80=)			125 f
		Albert Finners Client Approval 1	he co	Na	
Operators	Signature _	Mules Tracelle Chain Approval			

Albert frances

Operators Signature

Client Approval Mak Clinton

UGRO GEOSCIENCES, I	INC.		PT DAILY	LOG
Page of Fugro Job PERSONNEL: Operator: A   ber T	b. No. 0301-1023 Client Job. No. 1  Description N7  Helper Doniel + John Da			3
	out Truck: 5061 Pick-Up: 12096	Decon Unit:	yes	·
_	MILEAGE: Start: Finis			<del></del>
DAILY ACTIVITY FROM TO	ACTIVITY	FOOTAGE (FEET)	HOURLY WORK (MIN.)	MOVING STANDE DECO
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Payroli Hours: (Operator )	(Helper ) Delly Totale			
Operators Comments				

Operators Signature

Operators Comments	Sample	Hale		uTed	10	40'		
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**Daily Totals** 

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sample 170023

Decon

) (Helper )

samde 1700a3

water sample 1700a6

3:45

4:10

4:45

4:10

4:45

5:15

Payroll Hours: (Operator

5:35

Operators Signature Allet Tonnoca Client Approval ______ Mark C Todare

5:35 6:00 Sample 179026	econ Unit:	, g 	
EQUIPMENT:  Cone Rig: SOYO Grout Truck: 5061 Pick-Up: 10096 De  Client Contact: ABB MILEAGE: Start: Finish:  DAILY ACTIVITY FROM TO ACTIVITY  5:35 6:00 Sample 170026  6:00 6:30 Sample 170026	FOOTAGE (FEET)	Total:	
Cone Rig: _SO40	FOOTAGE (FEET)	Total:	
Client Contact: ABB MILEAGE: Start: Finish:  DAILY ACTIVITY FROM TO ACTIVITY  5:35 6:00 Sample 179026  6:00 6:30 Sample 179026	FOOTAGE (FEET)	Total:	
DAILY ACTIVITY  FROM TO ACTIVITY  5:35 6:00 Sample 170026  6:00 6:30 Sample 170026	FOOTAGE (FEET)	HOURLY WORK	·
5:35 6:00 Sample 179026 6:00 6:30 Sample 179026	(FEET)	WORK	11010
6:00 6:30 Sample 170026.	30'	Annearl	MOVIN STAND DECC (MIN
6:00 6:30 Sample 170026.			
6:30 7:00 Secuire eguip	30'		
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Payroll Hours: (Operator ) (Helper ) Daily Totals	50'	<u> </u>	

Operators Signature

Client Approval Mak C Turbar

FL	<b>IGRO</b>	GEOSCIENCES, INC.

Client Contact: ABB

CPT DAILY LOG

Page / of 2 Fugro Job. No. 0301-1003	Description NTC ORIGINAL Fla.
PERSONNEL:	McCoy ANNEX
Operator: Albert Helper: Danie	1 + 50hn Date: 4/7/98
EQUIPMENT:	· •
Cone Rig: SO40 Grout Truck: 5061 P	lck-Up: 12086 Decon Unit: 400

MILEAGE: Start: _____ Finish: _____ Total: _

DAILY	CTIVITY			HOURLY	MOVIN
FROM	TO	ACTIVITY	FOOTAGE (FEET)	WORK (MIN.)	STANDE DECO
7:00	8:00	water sample 170026	40'		
8:00	8:45	Sample 1700a6.	So'	ļ	
8:45	9:25	59mple 17006	60'		
9:25	10:00	Decon			
10:00	10:30	Water Sample 179020	10"		-
. 10:20	10:55	sample 170020	201		
10:55	11:25	sample 170000	36′		
11:05	11:50	sample 17 QD20	40'		
11:50	12:15	59mde 170020	SO'		
18:15	12:55	sample 170020	60'		
18:55	1:30	Lanch			
130	2:00	Con. Sample 60 Et			
2:00	2:30	Decon			
2:30	8:50	water somple 1700al	10'		
2:50	31/0	sample 17 QOAL	30'		
3:/0	3:35	sample 170021	301		
3:35	4:05	Sample 170021	40'		
4:05	4:40	sample 170021	50'		
4:40	5:10	sample 17 QOAL	60'		
5:10	5:30	Decon			
Payrol Hours:	(Operator	) (Helper ) Daily Totals	570'		

Operators Comments	Sample Holes	ardated to a	0'
La tradition to the second second second second second second second second second second second second second	(Grout total 120		
Operators Signature	Albert Timera	Client Approval	Alak Color

CPT	DAIL	_Y 1	OG

FUGRO G	EOSCIENC	CES, INC.	C	PT DAIL	YLOG
PERSONNE	L:	gro Job. No. 0301-1023 Client Job. No. 1  Description NTC  McI			Torin and
operator	71000	· iopo:	and the second second	* .	
	5040	Grout Truck: Plck-Up:			
Client Conta	id: <u>AP</u>	MILEAGE: Start: Finish:		Total.	
DAILY A	CTIVITY TO	ACTIVITY	FOOTAGE (FEET)	HOURLY WORK (MIN.)	MOVING STANDE DECOM (MIN.)
5:30	S: 50	Water Sample 1700ay	10'		
5:50	6:10	sample.	30'		
6:10	6:30	Sample	30'		
6:30	7:00	secuire eguip			
				\(\frac{1}{2}\)	
					-
					+-
<b></b>	: (Operator	) (Helper ) Deily Totals	60'		

Operators Comments			
			1
Operators Signature	Albert Porses	Client Approval	May C. I Now

Page / of 2 Fugro Job. No. 0301-1023	Description NTC ORIGINAL Fla.  McCox ANNex
PERSONNEL:	McCox ANNex
Operator: Albort Helper Dan	el & Sohn. Date: 4/8/88
EQUIPMENT:	. •
Cone Rig: SO40 Grout Truck: 5061	Pick-Up: 12 ०६७ Decon Unit: 400
Client Contact: ABB MILEAGE	E: Start: Finish: Total:

DAILY ACTIVITY			The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	HOURLY	MOVIN
FROM	ТО	ACTIVITY	FOOTAGE (FEET)	WORK (MIN.)	STANDE DECO
7:00	8:00	Water sample 1700ay	40'		
8:00	8:50	Sample 170024 (No sample)	50'		
8:50	9:05	59male 170024	60'		
9:25	10:00	Decon			
10100	10:05	Water sample 17 Q 019	10'		
-10:35	11:∞	sample 17Q019	ao'		
11:30	11:20	5ample 170,019	30″		·
11:20	11:50	sample 17(0019	40'		
11:50	19:30	5amole 170019	50'	1	
10:20	12:55	sample 17 Ada	60'		
12:55	1:30	Lynch			
1:30	2:00	Decon			
3:00	2:45	Water sample 179028 (No sample)	10'		
2:45	3!/5	sample 170028 (un sample)	20'		
3:15	3145	sample 179028 (No sample)	25'		
3:45	4:10	sample 17Q028	30'		
4:10	4:30	Somple 17@ 028	40'		
4:30	4:55	sample 1700a8	50'		
4:55	5:30	Sample 17 QO28	60'		
5:30	5:50	Decon			
Payroll Hours:	(Operator	) (Helper ) Daily Totals	595'	•	

Operators Comments	Sample Hole	5 grayted to	40'
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Operators Signature	Albert timera	Client Approval	Mahalodo

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200 2	of 2 F.	igro Job. No. <u>03</u> c	01-1023	Client Job. No Description	.I NTC C	Rlando	Flq.	
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PERSONNE			_			. 6/0		
Operator: _/	41bert	н	elper. <u>Daniel</u>	4.50hn	Date: _	4/8/98		
EQUIPMEN	π:							
Cone Ria:	5040	Grout Truck: _<	1061 F	Pick-Up: 1209	6	Decon Unit:	مولا	·
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DAILY A	TO		ACTIVITY			FOOTAGE	WORK	STANDE
, nom						(FEET)	(MIN.)	DECO
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6:15	6:30					20'		
6:30	7:00	samole	170025 170025	(NO San	npe)	30'		
	7:/5		170005		· /	35'		
7:15	7:30	Secure			·			
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10:45	11:15	Sample	40"		·
11:15	11:50	sample	50'		
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12:30	1:00	Decon			
1:00	1:00	water sample 170,031	10'		
1:20	1:50	Scaple 179031	90'		
1:50	2:15	5ample 170001	30'		
21/5	2:40	Sample 170031	40'		
2:40	3:75	Sample 17.0031	50'		
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Client Approval

Operators Signature Albert Team

#### APPENDIX H

FIELD SCREENING GROUNDWATER ANALYTICAL RESULTS (ON-SITE LABORATORY), GROUNDWATER EVALUATION

				RBC for						l	]		· · · · · · · · · · · · · · · · · · ·				
Identifier	FDEPG	CTL	FEDMCL	Tap Water	17Q00101	17Q00102	17Q00103	17Q00104	17Q00105	17Q00105	17Q00201	17Q00202	17000203	17000204	17000204	17000205	17Q0030
Sampling Date		1			3/18/98	3/18/98	3/18/98	3/18/98	3/23/98	3/23/98	3/19/98	3/19/98	3/19/98	3/19/98	3/19/98	3/19/98	
Depth bis (ft)					5-9	10-14	15-19	20-24	25-29	25-29	5-9	10-14	15-19	20-24			3/19/98
Volatile Organics, ug/L									20 20	20-20	3-3	10-14	13-19	20-24	20-24	25-29	5-9
1,1-Dichloroethene	7	p/c	7	0 044	2.4	82	26	4.7	U	U	SHIPMI	i i i i i i i i i i i i i i i i i i i	ESIO.	4		U	<u> </u>
Benzene	1	p/c	5	0 36	- 1	0.7	1.2	U	U	U	U STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA	1.6	2.5	-:	<del></del>	<del></del>	4.1
cis-1,2-Dichloroethene	70	p/st	70	61 1	1 40	1500	1900		U	U	( 2300 F	Al		200	U Maria de la Carlo	U	U
Ethylbenzene	. 30	s/st	700	1,300 r	ı U	U	0.6	U	U	U	U	0.8	1.2			2.5	33
m/p-Xylene	20	s/st	10,000	1,400 r	ט	υ	1.1	U	Ü	Ü	3.8	3.9	3.2	U	<u> </u>	U	U
o-Xylene	20	s/st	10,000	1,400 r	, U	0.5	0.7	U	Ü	U	U	0.6	1.3	U		U	U
Tetrachloroethene	3	p/c	5	1.1 0	U	U	1.8	U	Ü	U	U	U	U U	U	<u> </u>	U	U
Toluene	40	s/st	1,000	750 r	u	2.4	7.7	Ü	U	บ	9.6	14			<u> </u>	U	U
trans-1,2-Dichloroethene	100	p/st	100	120 г	1.0	16	5.4	1.3	U	U	57		12	U	U	U	U
Trichloroethene		p/c	5	1.6 c	·	Elizabeth de de de de de de de de de de de de de	# 970 L		U			92	80	1.5	1	U	1.2
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Identifier	FDEPG	CTL	FEDMCL	RBC for Tap Water	17Q00302	17Q00303	17Q00304	17Q00305	17Q00306	17Q00306		17Q00308				17Q00403	17Q0040- 3/20/98
Sampling Date					3/19/98	3/19/98	3/19/98	3/20/98	4/4/98	4/4/98	4/4/98	4/4/98	3/20/98	3/20/98	3/20/98	3/20/98	
Depth bis (ft)					10-14	15-19	20-24	25-29	39-40	39-40	49-50	59-60	5-9	5-9	10-14	15-19	20-24
Volatile Organics, ug/L											·		5.4	6.2			1.4
1,1-Dichloroethene	7	p/c	7	0.044	5 · 16 · 1	\$ - 58 T	35 11 55	U	U	U	U	U		<del> </del>			U
Benzene	1	p/c	5	0.36	U	¥-1.6	U	U	US	U	U	US	U	U	U 33 244 3	2 - 48-15 B	
cis-1,2-Dichloroethene	70	p/st	70	61 r	810 3	¥ 3200 ×	<b>1560</b>	9	6.4	6.9	12		PAROE I				
Ethylbenzene	30	s/st	700	1,300 r	ı U	1.5	U	U	US	U	U	US	U	U	U	U	U
		s/st		1,400 r	, U	3.3	U	U	US	U	U	US	U	U	U	U	U
m/p-Xylene		ł	+	1,400 г		1.9	U	U	US	U	U	US	U	U	U	0.6	U
o-Xylene	20	s/st	10,000	1,400	<u> </u>		<del></del>		U	U	U	U	U	U	U	U	U
Tetrachloroethene	3	p/c	5	1.1	UU	1.1	U	U	ļ	ļ	<del></del>			U	2.1	5	U
Toluene	40	s/st	1,000	750 r	0.98	38	4.9	U	US	U	U	US	U			3.5	2.9
trans-1,2-Dichloroethene	100	p/st	100	120 1		80	10	U	U	U	0.6	U	1	1.2	12	7.33	
Trichloroethene	1	p/c	5	1.6	18 18	8.8.6	# 1155	U	4 50 E				1		and the state of		Section 1
Vinyl Chloride	1	p/c	2	0 019	550°	1400	\$ 240 ·s	S\$ 1.261	Hard O.S.			E Alexander					

				RBC for	T												
identifier	FDEPG	CTL	FEDMCL	Tap Water	17Q00405	17Q00406	17Q00407	17Q00408	17Q00409	17Q00410	17Q00411	17Q00501	17Q00502	17Q00503	17Q00503	17Q00504	17Q00505
Sampling Date					3/20/98	4/3/98	4/3/98	4/3/98	4/3/98	4/3/98	4/3/98	3/21/98	3/21/98	3/21/98	3/21/98	3/21/98	3/21/98
Depth bis (ft)					25-29	34-35	39-40	44-45	49-50	54-55	59-60	5-9	10-14	15-19	15-19	20-24	25-29
Volatile Organics, ug/L	,																
1,1-Dichloroethene	7	p/c	7	0 044	U	U	u	U	U	U	U	U	U	U	U	U	U
Benzene	1	p/c	5	0 36		U	U	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	70	p/st	70	61	1.5	0.7	U	U	4.4	13	10	1.1 J	8.2 J	2.8 J	3.4 J	U	U
Ethylbenzene	30	s/st	700	1.300	ı U	U	U	U	U	U	U	U	U	U	U	U	U
m/p-Xylene	20	s/st	10,000	1,400	n U	U	U	U	U	U	U	U	U	U	U	U	U
o-Xylene	20	s/st	10,000	1,400	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	3	p/c	5	1.1	U	U	U	U	U	0.7	U	U	U	U	U	U	Ū
Toluene	40	s/st	1,000	750	ı U	U	U	U	U	U	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	100	p/st	100	120	n U	U	U	U	U	۲	U	U	U	U	U	U	U
Trichloroethene	3	p/c	5	1.6	4.5	15.24164	9.9.6 14	7.8	3550 88	<b>HEUGH</b>	銀数貨幣	U	U	2.0	2.7	U	2.1
Vinyl Chloride	1	p/c	2	0.019	U	U	U	U		\$0000000 \$300\$000\$398\$0000 1000\$000	60000010000000000000000000000000000000	U	U	U	U	U	U

			· · · · · · · · · · · · · · · · · · ·	RBC for	:	1											
identifier	FDEPGO	CTL	FEDMCL	Tap Water	17Q00601	17Q00602	17Q00603	17Q00604	17Q00605	17Q00701	17Q00702	17Q00703	17Q00704	17Q00705	17Q00801		17Q00803
Sampling Date					3/21/98	3/21/98	3/21/98	3/21/98	3/21/98	3/20/98	3/20/98	3/20/98	3/20/98	3/20/98	3/20/98	3/20/98	3/21/98
Depth bis (ft)					5-9	10-14	15-19	20-24	25-29	5-9	10-14	15-19	20-24	25-29	10-14	15-19	20-24
Volatile Organics, ug/L																<u> </u>	
1,1-Dichloroethene	7	p/c	7	0.044	U	U	U	U	U	U	U	U	U	U	U	U	U
Benzene	1	p/c	5	0.36	U	U	U	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	70	p/st	70	61 n	1.9 J	2.4 J	2.3 J	U	U	U	U	U	U	U	U	U	U
Ethylbenzene	30	s/st	700	1,300 n	U	U	U	U	U	U	U	U	U	U	U	U	U
m/p-Xylene	20	s/st	10,000	1,400 n	U	U	U	Ų	U	U	Ü	U	U	U	U	U	U
o-Xylene	20	s/st	10,000	1,400 n	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachioroethene	3	p/c	5	1.1 0	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	40	s/st	1,000	750 n	U	U	U	U	U	د	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	100	p/st	100	120 n	U	υ	U	U	U	ນ	U	U	U	U	U	U	U
Trichloroethene	3	p/c	5	1.6 c	U	U	0.8	U	U	υ	U	U	U	U	U	U	U
Vinyl Chloride	1	p/c	2	0.019	U	U	U	U	U	υ	U	U	υ	υ	U	υ	U

			RBC for			1								1	<del> </del>	Т
Identifier	FDEPGCTL	FEDMCL	Tap Water	17Q00804	17Q00901	17Q00902	17Q00902	17Q00903	17Q00904	17Q00905	17Q01001	17Q01002	17Q01003	17001004	17001004	1700100
Sampling Date				3/21/98	3/21/98	3/21/98	3/21/98	3/21/98	3/21/98	3/21/98	3/22/98	3/22/98	3/22/98	3/22/98	3/22/98	3/22/98
Depth bis (ft)				25-29	5-9	10-14	10-14	15-19	20-24	25-29	4-9	10-14	15-19	20-24	20-24	25-29
Volatile Organics, ug/L			•	•	1											20-23
1,1-Dichloroethene	7 p/c	7	0 044	U	U	U	U	U	U	U	U	U	U		\$ 1 Y	3.4
Benzene	1 p/c	5	0 36 с	U	U	. u	U	υ	U	U	U	U	U	U	Ü	U
cis-1,2-Dichloroethene	70 p/st	70	61 n	U	U	U	U	U	U	U	U	Ü	23 E	W.DE		
Ethylbenzene	30 s/st	700	1,300 n	·υ	U	U	U	U	U	U	U	U	U	U	U	U
m/p-Xylene	20 s/st	10.000	1,400 n	U	U	U	U	U	U	U	U	U	U	Ü	U	U
o-Xylene	20 s/st	10,000	1,400 n	U	U	. υ	U	U	U	υ	υ	U	U	U	U U	U
Tetrachloroethene	3 p/c	5	11 c	. U	U	υ	U	U	U	U	U	U	U	Ü	U	1.7
Toluene	40 s/st	1,000	750 n	u '	U	U	U	U	U	U	U	Ū	U	Ü	<del>U</del>	U
rans-1,2-Dichloroethene	100 p/st	100	120 n	΄ υ ΄	υ	υ	U	U	U	U	U	U	3	37	31	12.0
Trichloroethene	3 p/c	5	16 c	U	U	U	U	U	U	U	U	U	9.9	C Wast	1 (46)	12.0
/inyl Chloride	1 p/c	2	0 019 c	U	U	U	U	U	u	U	Ü	Ü	0.9	2 Abrilla Carl		100

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Identifier	FDEPG	CTL	FEDMCL	RBC for Tap Wate	- 1	7Q01006	17Q01007	17Q01008	17Q01101	17Q01102	17Q01102	17Q01103						
Sampling Date						4/3/98	4/3/98	4/3/98	3/23/98	3/23/98	3/23/98	3/23/98	3/23/98	3/23/98	3/21/98	3/22/98	3/22/98	3/22/98
Depth bis (ft)						39-40	49-50	59-60	4-9	10-14	10-14	15-19	20-24	25-29	5-9	10-14	15-19	20-24
Volatile Organics, ug/L																	was gray in	
1,1-Dichloroethene	7	p/c	7	0.044		U	U	U	U	0.9	0.9	3.2	U	U	U	100		3.3
Benzene	1	p/c	5	0 36	С	US	U	U	U	U	U	146	U	U	U	U	U	U
cis-1,2-Dichloroethene	70	p/st	70	61	n	5.1	4.2	1.2	U	120 h	24 10	e ( <del>5</del> 7/Esti	36 E	0.6	8.2			L Mile I
Ethylbenzene	30	s/st	700	1,300	n	US	U	U	U	U	U	U	U	U	U	U	U	U
m/p-Xylene	20	s/st	10,000	1,400	n	US	U	U	U	U	U	U	U	U	U	U	U	U
o-Xylene	20	s/st	10,000	1,400	n	US	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene		p/c	5	1.1	С	U	U	U	U	U	U		U	U	U	0.7	U	U
Toluene		s/st	1,000	750	n	us	U	U	U	U	U	U	U	U	U	U	1.7	U
trans-1,2-Dichloroethene	<b> </b>	p/st	100	120	<del>  </del> -	U	U	U	U	7.2	7.0	27 E	4.0	U	U	37 E	37 E	6
		p/st	- 5	1			44 5	44.8	U		100000	288 ES	AU ES	1.9	U	NI NI		and a
Trichloroethene Vinyl Chloride		p/c	2	0 019	-	U	U	U	U	20.9	100	677 E		U	. 2			

age 6 of 7APPH.:

ldentifier	FDEPG	CTL	FEDMCL	RBC for Tap Water	17Q01205	17Q01206	17Q01301	17Q01302	17Q01303	17Q01304	17Q01305	17Q01306	17Q01307	17Q01308	17001401	17001402	17001403
Sampling Date					3/22/98	4/9/98	3/22/98	3/22/98	3/22/98	3/22/98	3/22/98	4/4/98	4/4/98	4/4/98	3/24/98	3/24/98	3/24/98
Depth bis (ft)					25-29	59-60	5-9	10-14	15-19	20-24	25-29	39-40	49-50	59-60	5-9	10-14	15-19
Volatile Organics, ug/L																10-14	13-13
1,1-Dichloroethene	7	p/c	7	0:044	U	U	U	3			0.5	u	U	u	U	U	U
Benzene	1	p/c	5	0.36	c U	U	U	Ü	U	U	U	US	U	U	U	U	U
cis-1,2-Dichloroethene	70	p/st	70	61	1.2	0.7	U	5.540	NEATON I			5.2	0.9	0.9	5.4	15	0.6
Ethylbenzene	30	s/st	700	1,300	n U	U	U	U	U	U	U	US	U	U	U	Ü	U
m/p-Xylene	20	s/st	10,000	1,400	n U	U	U	U	U	U	U	US	U	U	U	U	U
o-Xylene	20	s/st	10,000	1,400	1 U	U	U	U	U	U	U	US	Ü	U	U	U	U
Tetrachloroethene	3	p/c	5	1.1	U .	U	U	U	U	U	U	U	U U	U	Ü	Ü	U
Toluene	40	s/st	1,000	750	n U	U	U	U	U	0.7	U	US	U	U	U	U	U
trans-1,2-Dichloroethene	100	p/st	100	120 1	ı Ü	U	U	14	33 E	24 E	4.4	U	Ü	Ü	- <del>U</del>	2.0	U
Trichloroethene	3	p/c	5	1.6	U	0.7	U	6 200 M	E Fair			G.		2.3	U	U	U
Vinyl Chloride	1	p/c	2	0 019	U	U		74	BELLADED BOOKS SEEL SX 1	( <u>(</u>	1.324	U	U	U	U		U

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ldentifier	FDEPGCTL	FEDMCL	RBC for Tap Water	17Q01404	17Q01405	17Q01405	17Q01501	17Q01502					17Q01602	17Q01603 3/25/98	17Q01603 3/25/98	17Q01604 3/25/98
Sampling Date	. 1. 7		1 - 1	3/24/98	3/24/98	3/24/98	3/24/98	3/24/98	3/24/98	3/24/98	3/24/98	3/25/98	3/25/98		15-19	20-24
Depth bis (ft)			<del>-</del>	20-24	25-29	25-29	4-9	10-14	15-19	20-24	25-29	4-9	10-14	15-19	15-19	20-24
Volatile Organics, ug/L			1	1												1.0
		7	0 044	Ü	u	U	U	U	2.7	U	U	U	2.3			
1,1-Dichloroethene	7 p/c	1	<b>1</b>	£		U	l u	U	U	U	U	U	U	U	U	U
Benzene	1 p/c	5	0 36 c	<u></u>	U			270	4401	U	U	21 E	7.4	¥3:42	l' CH	
cis-1,2-Dichloroethene	70 p/st	70	61 n	U	0.9	0.9	0.7					U	11	U	U	U
Ethylbenzene	30 s/st	700	1,300 n	U	U	U	U	U	U	U	U	U	1 -11	- u	u	U
m/p-Xylene	20 s/st	10,000	1,400 п	U	U	U	U	U	U	U	U	U	11	U	U	U
o-Xylene	20 s/st	10,000	1,400 г	ı U	υ	U	U	U	U	U			1000			1
Tetrachloroethene	3 p/c	5	1.1 0	U	U	U	U	U	U	U	U	U		0.6	U	U
Toluene	40 s/st	1,000	750 r	U	U	υ	U	U	U	U	U	U	1.0	- 10.6 - 10.6 - 10.6		12
trans-1,2-Dichloroethene	<del></del>	<del></del>	120 r	ı U	U	U	U	8.2	10	U	U	U	11			(4)
Trichloroethene	3 p/c	5	1.6	U	1.2	1.2	U	1100	2500 2	U	U		U	U	0.9	U
Vinyl Chloride	1 p/c	2	0.019	U	U	U	U	U	U	U	<u> </u>	U	<del></del>		0.0	

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				RBC for	1			i								T	1
Identifier	FDEPG	CTL	FEDMCL	Tap Wate	r   17Q01605	17Q01606	17Q01607	17Q01608	17Q01701	17Q01702	17Q01703	17Q01704	17Q01705	17Q01706	17Q01706	17Q01707	1700170
Sampling Date					3/25/98	4/4/98	4/4/98	4/4/98	3/25/98	3/25/98	3/25/98	3/25/98	3/25/98	4/4/98	4/4/98	4/4/98	4/4/98
Depth bis (ft)				Ī	25-29	39-40	49-50	59-60	4-9	10-14	15-19	20-24	26-30	39-40	39-40	49-50	59-60
Volatile Organics, ug/L					1											1000	00 00
1,1-Dichloroethene	7	p/c	7	0 044	Ü	U	U	U	U	U	2.6	1000 U	5.6	U	U	U	U
Benzene	1	p/c	5	0 36	c U	U	J	U	U	Ü	U	1000 U	U	U	U	U	Ü
cis-1,2-Dichloroethene	70	p/st	70	61	- 1100 S	- 18	U	U	33 E	24 E		1000 U		5.4	5.6	2.2	2.5
Ethylbenzene	30	s/st	700	1,300	n U	U	U	U	U	U	U	1000 U	U	U	U	U	Ü
m/p-Xylene	20	s/st	10,000	1,400	n U	U	U	U	U	U	U	1000 U	U	U	U	U	U
o-Xylene	20	s/st	10,000	1,400	n U	υ	Ų	υ	υ	υ	υ	1000 U	Ü	Ü	U	U	U
Tetrachloroethene	3	p/c	5	1.1	c U	U	U	U	U	8.2		1000 U				1.3	2.4
Toluene	40	s/st	1,000	750	n U	· U	U	U	Ū	U	U	1000 U	7.2	U	U	U	U
rans-1,2-Dichloroethene	100	p/st	100	120	n U	U	U	U	2.8	U	12	1000 U	23 E	Ü	U	Ü	U
Trichloroethene	3	p/c	5	1.6	1 16 4	33 EJA	υ	2.1	(61000E)	140 E		84000 E				I ZA:	
√inyl Chloride	1	p/c	2	0.019		U	U	U	U	U				U	Ü	U	U

14-4:6:	FDEPGCT	FEDMO	RBC for	17001801	17001802	17001803	17001804	17001805	17001806	17001807	17001808	17001901	17Q01902	17001903	17Q01904	17Q01905
	FUEPGCT	. FEUMU	L Tap Water	ł	<del>                                     </del>			<del></del>	<del></del>				4/8/98	4/8/98	4/8/98	4/8/98
Sampling Date				3/25/98	3/25/98	3/25/98	3/25/98	3/25/98	4/6/98	4/6/98	4/6/98	4/8/98				
Depth bis (ft)				4-9	10-14	15-19	20-24	25-29	39-40	49-50	59-60	4-9	10-14	15-19	20-24	25-29
Volatile Organics, ug/L													ļ		· · · · · · · · · · · · · · · · · · ·	
1,1-Dichloroethene	7 p/c	; 7	0 044	Ü	U	U	U	US	U	U	U	U	U	U	U	U
Benzene	1 p/c	5	0 36 c	U	U	U	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	70 p/s	t 70	61 n	28 E	33	U	U	40 ES =	2.2	U	U	U	US	U	US	U
Ethylbenzene	30 s/s	700	1.300 n	įυ	U	U	U	U	U	υ	U	U	υ	U	U	U
m/p-Xylene	20 s/s	t 10.000	1,400 n	U	υ	υ	U	U	U	U	U	U	U	U	U	U
o-Xylene	20 s/s	10,000	1,400 n	υ	υ	υ	υ	U	U	U	U	U	U	U	U	υ
Tetrachloroethene	3 p/c	5	110	U	υ	υ	υ	US	υ	υ	U	U	US	U	US	U
Toluene	40 s/s	1,000	750 n	. U -	U	υ	υ	U	U	U	U	U	U	U	U	U.
trans-1,2-Dichloroethene	100 p/s	100	120 п	U	U	υ	U	US	U	U	U	U	US	U	US	U
Trichloroethene	3 p/c	5	16 0	10	U	U	U	3 18 S /	17.79.	U	U	U	US	U	US	U
Vinyl Chloride	1 p/c	. 2	0 019 c	υ	U	U	U	US	U	U	U	U	US	U	US	U

				RBC for	•													
Identifier	FDEPG	CTL	FEDMCL	Tap Wate	er 170	Q01906	17Q02001	17Q02002	17Q02003	17Q02004	17Q02005	17Q02006	17Q02101	17Q02102	17Q02103	17002104	17002105	1700210
Sampling Date						4/8/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98	4/7/98
Depth bis (ft)					3	39-40	9-10	19-20	29-30	39-40	49-50	59-60	9-10	19-20	29-30	39-40	49-50	59-60
Volatile Organics, ug/L															20 00	-00-10	40-00	33-00
1,1-Dichloroethene	7	p/c	7	0.044		U	U	E 9 (/*)	U	U	U	U	U	U	U	0.5	U	U
Benzene	1	p/c	5	0.36	С	U	U	U	U	U	U	U	Ū	U	U	U	U	<del>U</del>
cis-1,2-Dichloroethene	70	p/st	70	61	n	U	23 E	4110 EU	25 E	6	17 E	3.0	Ü	32 E	antage C	26 E	3.6	2.5
Ethylbenzene	30	s/st	700	1,300	n	U	U	U	U	U	U	U	U	U	U	U	U	U
m/p-Xylene	20	s/st	10,000	1,400	n	U	U	U	U	u	u	U	U	U	U	- ŭ	U	U
o-Xylene	20	s/st	10,000	1,400	п	U	U	U	U	U	U	U	- <del>U</del>	U U	Ü	U	U	Ü
Tetrachloroethene	3	p/c	5	1.1	С	U	U	U	U	U	U	U	U	Ü	0.9	U	U	U
Toluene	40	s/st	1,000	750	n	U	U	U	U	U	U	Ü	U	Ü	U	- ŭ	U	U
rans-1,2-Dichloroethene	100	p/st	100	120	n	U	14	33 E	1.0	U	u	U	U	4.2	16	U	U	U
Trichloroethene	3	p/c	5	1.6	С	U	1.1	₩25 E.E		1.1	a Wila	U I	Ü		0.7	2.6	2.2	<del></del>
/inyl Chloride	1	p/c	2	0.019	С	U		2#4.7 EE	0.7	U	List (N.E.) Print total. U	U	U	U V	U	U	<u> </u>	1.3 U

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																	i
l do natifica	EDEBCO	`TI	EEDMCI	RBC for Tap Water	17002201	17002202	17Q02203	17Q02204	17Q02205	17Q02205	17Q02206	17Q02301	17Q02302	17Q02303	17Q02304	17Q02305	17Q0230
ldentifier	FUEPG	71L	PEDMICE	Tap Water			4/6/98	4/6/98	4/6/98	4/6/98	4/6/98	4/6/98	4/6/98	4/6/98	4/6/98	4/6/98	4/6/98
Sampling Date				l	4/6/98	4/6/98					<del>                                     </del>	5-9	10-14	15-19	20-24	25-29	39-40
Depth bis (ft)					9-10	19-20	29-30	39-40	49-50	49-50	59-60	J-9	10-14	13-13	20-24	2020	
Volatile Organics, ug/L											<del> </del>		<del> </del>	·U	US	U	U
1,1-Dichloroethene	7	p/c	7	0.044	U	U	€ 23 E	3.0	1.0	U	U	U	U			U	U
Benzene	1	p/c	5	0.36	U	U	U	U	U	U	U	U	U	U	U		<del></del>
cis-1.2-Dichloroethene		p/st	70	61 n	U	U	476 E	1 58 E	44 E	40 E	4.7	U	U	U	US	5.9	6.4
·		-	I	<del>    -</del>	1	U	11	U	U	U	U	U	U	Įυ	U	U	U
Ethylbenzene	30	s/st	700	1,300 n	<del></del>	<del></del>	<del> </del>		U	U	U	U	U	U	U	U	U
m/p-Xylene	20	s/st	10,000	1,400 r	U	U_	<u> </u>	U	<del> </del>	ļ <u>-</u>	<del>                                     </del>		u	U	U	U	U
o-Xylene	20	s/st	10,000	1,400 r	ı U	U	U	U	U	<u> </u>	U	U	<del></del>	<del></del>	L	U	Ü
Tetrachloroethene	3	p/c	5	1.1	U	· U	0.6	0.9	U	U	U	U	U	U	US	<del> </del>	<del> </del>
Toluene	40	s/st	1.000	750 r	ı U	U	U	U	υ	U	U	U	U	U	U	U	U
			ł	120 r	U	U	2.2	0.8	U	U	U	U	U	U	US	U	U
trans-1,2-Dichloroethene	100	p/st	100	÷	<u>'</u>	1		1	3 5 A R	11	1	U	U	U	us	U	U
Trichloroethene	3	p/c	5	1.6	il U	U	<b>6</b> 5 8	1.9	2/1			J	<del>                                     </del>	U	US	U	U
Vinyl Chloride	1	p/c	2	0 019 0	: U	U	5-12	N 15 18	CK S			<u> </u>	<u> </u>	1 0	1 30		<del></del>

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			RBC for	T			i						T		-	
		FEDMCL	Tap Water	17Q02307	17Q02308	17Q02401	17Q02402	17Q02402	17Q02403	17Q02404	17Q02406	17Q02501	17002502	17002503	17002504	1700250
Sampling Date				4/6/98	4/6/98	4/7/98	4/7/98	4/7/98	4/7/98	4/8/98	4/8/98	4/8/98	4/8/98	4/9/98	4/9/98	4/9/98
Depth bis (ft)				49-50	59-60	9-10	19-20	19-20	29-30	39-40	59-60	9-10				<del></del>
Volatile Organics, ug/L		ii		1	1				20.00	33-40	33-00	9-10	19-20	34-35	39-40	49-50
1,1-Dichloroethene	7 p/c	7	0 044	U	U	U	US	US	u	U	U	U	U	US	U	<del></del>
Benzene	1 p/c	5	0 36 с	U	U	U	U	U	U	- Ū	U	Ü	U			U
cis-1,2-Dichloroethene	70 p/st	70	61 n	06	U	Ū	US	US	ŭ	U	U	U	U	U	U	U
Ethylbenzene	30 s/st	700	1,300 n	U	U	Ū	U	U	Ü	U U	U	U		US	U	U
m/p-Xylene	20 s/st	10.000	1,400 n	U	U	U	U	U	U U	U	U	U	.U		U	U
o-Xylene	20 s/st	10,000	1,400 n	U	U	U	U	U	U	U	Ü		U	<del>''</del> -	<u>U</u>	U
Tetrachloroethene	3 p/c	5	1.1 c	U	U	U	US	US	U	U	U	U	U	U	U	U
Toluene	40 s/st	1.000	750 n	1	U	U	U	U	U			U	U	US	U	U
trans-1,2-Dichloroethene	100 p/st	100	120 n	1 11	U	U	US	US		U	U	U	U	U	U	U
Trichloroethene	3 p/c	5	16 c	11	U	U			U	U	U	U	U	US	U	U
Vinyl Chloride	1 p/c	2	0.019 c				US	US	U	U	U	U	U	US	U	U
y. omorido	, pic		0.019 C	U	U	U	US	US	U	U	U	U	U	US	u	U

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																1
Identifier	FDEPGCTL	EEDMCI	RBC for Tap Water	17002506	17Q02601	17Q02602	17Q02603	17Q02604	17Q02605	17Q02606	17Q02606	17Q02701	17Q02702	17Q02703		17Q02704
		LEDITION	1	4/9/98	4/6/98	4/6/98	4/6/98	4/7/98	4/7/98	4/7/98	4/7/98	4/9/98	4/9/98	4/9/98	4/9/98	4/9/98
Sampling Date			1					39-40	49-50	59-60	59-60	6-10	16-20	29-30	29-30	39-40
Depth bis (ft)				59-60	9-10	19-20	29-30	39-40	49-30	39-00	33-05		10			
Volatile Organics, ug/L										<del></del>	U	U	U	U	U	U
1,1-Dichloroethene	7 p/c	7	0.044	.U	U	1.0	U	U	U	U		— <u> </u>		IJ	U	Ü
Benzene	1 p/c	5	0.36 c	U	U	U	U	U	U	U	U	U	U		[	
			61 n	1	174 E	€100 E	30 E	U	U	2.3	2.0	U	U	20 E	20 E	31 E
cis-1,2-Dichloroethene	70 p/s	`	+	<del>'</del>			U	U	U	U	U	U	U	U	U	U
Ethylbenzene	30 s/s	700	1,300 n	U U	U	U				Ü	U	U	U	U	U	U
m/p-Xylene	20 s/s	10,000	1,400 n	ı U	U	U	U	U	U	<del></del>	U	U	U	Ü	u	U
o-Xylene	20 s/s	10,000	1,400 n	1 U_	U_	U	U	U_	U	U	<del> </del>	<u> </u>	<u> </u>		U	U
Tetrachloroethene	3 p/c	5	1.1 0	U	U	U	U	U	U	U	U	U	U	U	ļ	<del></del>
Toluene	40 s/s	- <del></del>	750 r	1 U	U	U	U	U	U	U	U	U	U	U	U	U
		<del></del>	120 г	ı U	33 E	34 E	1.7	U	U	U	U _	U	U	U	U	U
trans-1,2-Dichloroethene	100 p/s						70/2	0.7	U		2.2	U	U	υ	υ	0.7
Trichloroethene	3 p/c	5	1.6	U	9819.136	#440 E					U	Ū	U.	U	U	U
Vinyl Chloride	1 p/c	. 2	0.019	e U	U	1.0	U	U	U	U	<u> </u>	<u> </u>	<u> </u>		<u> </u>	

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				RBC for							T T			T			
Identifier	FDEPGCT	L FED	MCL	Tap Water	17Q02705	17Q02803	17Q02803	17Q02804	17Q02805	17Q02806	17Q02901	17Q02902	17Q03001	17Q03002	17003101	17003102	17003101
Sampling Date					4/9/98	4/8/98	4/8/98	4/8/98	4/8/98	4/8/98	4/9/98	4/9/98	4/9/98	4/9/98	4/9/98	4/9/98	4/9/98
Depth bis (ft)	-				49-50	29-30	29-30	39-40	49-50	59-60	16-20	26-30	6-10	16-20	9-10	19-20	29-30
Volatile Organics, ug/L		·	• •	•	•	1								10.20	0-10	13-20	25-30
1,1-Dichloroethene	7 p/	c į	7		υ	υ	U	1.1	U	U	U	U	U	1.8	U	US	U
Benzene	1 p/	c [	5	0 36 с	U	U	U	U	U	U	U	U	U	U	U	U	U
cis-1,2-Dichloroethene	70 p/	st	70	61 n	22 E	18	22	32 E	11	0.7	Ū	U	6.0	39 E	Ü	US	U
Ethylbenzene	30 s/	st 7	00	1,300 n	U	U	U	U	U	U	Ü	U	U	U	U	11	u
m/p-Xylene	20 s/	st 10,0	00	1,400 n	U	υ	U	U	U	U	U	Ü	U	Ü	U	- 11	U
o-Xylene	20 s/s	st 10.0	00	1,400 n	U	U	U	U	U	U	U	U	U	U	U		
Tetrachloroethene	3 p/c	:	5	1 1 c	U	U	Ü	Ū	U		U	U	n	1.1	U	US	U
Toluene	40 s/s	st 1.00	00	750 n	ี	Ü		11	- <del>-</del> u	U	U	υ	U	U		05	U
trans-1,2-Dichloroethene	100 p/s	st 10	ooii	120 n	· u	Ū	Ü	0.5	u	U	U	U	U	12	U	- 110	U
Trichloroethene	3 p/c	=	5	1 6 c	Ü	ű	U	2 6.3 / F	3.0	0.8	U	U	U		U	US	U
√inyl Chloride	1 p/c	•• <del>•</del> • • • •	2		_	37208								and the same	<u> </u>	US	U
Vinyl Chloride	1 p/c		2	0 019 c	U	2.0	1.8	\$100 E	13403E	U	U	U	0.5	371	U	US	<u> </u>

				RBC for	- 4	47000404	47000405	47002106	OR0800	OR0810
Identifier	FDEPG	CTL	FEDMCL	Tap Wate	1	17Q03104	17Q03105			
Sampling Date						4/9/98	4/9/98	4/9/98	3/21/98	3/23/98
Depth bis (ft)						39-40	49-50	59-60		
Volatile Organics, ug/L										
1,1-Dichloroethene	7	p/c	7	0.044		U	U	U	U	U
Benzene	1	p/c	5	0.36	С	U	U	U	U	U
cis-1,2-Dichloroethene	70	p/st	70	61	n	U	U	U	3.2	U
Ethylbenzene	30	s/st	700	1,300	n	U	U	U	U	U
m/p-Xylene	20	s/st	10,000	1,400	n	U	U	U	U	U
o-Xylene	20	s/st	10,000	1,400	n	U	U	U	U	U
Tetrachloroethene	3	p/c	5	1.1	c	U	U	U	U	U
Toluene	40	s/st	1,000	750	n	U	U	U	U	U
trans-1,2-Dichloroethene	100	p/st	100	120	n	U	U	U	U	U
Trichloroethene	3	p/c	5	1.6	С	1.2	U	U	U	U
Vinyl Chloride	1	p/c	2	0.019	c	U	U	U	U	U

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#### NOTES:

Groundwater background screening value is twice the average of detected concentrations for inorganic analytes.

FDEPGCTL = Florida Department of Environmental Protection, Groundwater Cleanup Target Levels, Chapter 62-785 FAC, April 30, 1998.

FEDMCL= Federal Maximum Contaminant Levels, Primary Drinking Water Regulations and Health Advisories, February 1996.

RBC = Risk-Based Concentration Table, USEPA Region III, May 1996, R.L. Smith. RBC for chromium is based on chromium VI. RBC for lead is not available, value is treatment technology action limit for lead in drinking water distribution system identified in Drinking Water Standards and Health Advisories (USEPA, 1995). For essential nutrients (calcium, magnesium, potassium, and sodium) screening values were derived based on recommended daily allowances.

- s = secondary groundwater standard.
- st = systemic toxicant.
- mc = based on minimum criteria
- p = primary standard.
- o = organoleptic.
- n = noncarcinogenic effects.
- c = carcinogen (GCTLs) or carcinogenic effects (RBCs).

USEPA = U.S. Environmental Protection Agency.

- J = Reported concentration is an estimated quantity.
- E = Concentration exceeds the highest calibration standard.
- U = Undetected
- S = Percent recovery exceeds criteria.
- $\mu g/L = micrograms per liter.$
- mg/L = miligrams per liter.

Bold/shaded numbers indicate exceedance of groundwater guidance.

#### APPENDIX I

#### GROUNDWATER FLOW CHARACTERIZATION TABLES (MONITORING WELL CONSTRUCTION DETAIL, WATER-LEVEL ELEVATION DATA, HYDRAULIC POTENTIAL DATA, SLUG-TEST RESULTS)

Table I-1	Monitoring Well Construction Details
Table I-2	Water-Level Elevation Survey
Table I-3	Hydraulic Potential Survey Results
Table I-4	Hydraulic Conductivity Testing Results

#### Table I-1 Monitoring Well Construction Details

#### Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

			Uni	indo, Florida	Lawrence of the second of the second	and the second of	er digger, and the con-	<u>a 1980 €11 7538</u>
Well ID ¹	Date Installed	Borehole Depth (feet bis)	Well Depth (feet bis)	Screen interval (feet bis)	Filter Pack Interval (feet bls)	Seal Interval (feet bis)	Grout Interval (feet bis)	Casing Depth (feet bis)
Initial Screenin	g:							
OLD-17-01A	5/15/95	14.0	12.5	2 to 12	1 to 14	0.5 to 1	0 to 0.5	NA
OLD-17-02A	5/15/95	14.0	12.5	2 to 12	1 to 14	0.5 to 1	0 to 0.5	NA
OLD-17-03A	5/16/95	14.0	12.5	2 to 12	1 to 14	0.5 to 1	0 to 0.5	NA
OLD-17-04A	5/16/95	14.0	12.5	2 to 12	1 to 14	0.5 to 1	0 to 0.5	NA
OLD-17-05A	5/15/95	14.0	12.5	2 to 12	1 to 14	0.5 to 1	0 to 0.5	NA
OLD-17-24T ²	6/2/95	5.0	5.0	5.0	NA	ŇÁ	NA	NA .
Supplemental :	Screening (Ph	nase I):						
OLD-17-06A3	1/23/97	11.0	11.0	2 to 11	1 to 11	0.5 to 1	0 to 0.5	NA
OLD-17-07A ³	1/23/97	11.0	11.0	2 to 11	1 to 11	0.5 to 1	0 to 0.5	NA
OLD-17-08A ³	1/23/97	11.0	11.0	2 to 11	1 to 11	0.5 to 1	0 to 0.5	NA
OLD-17-09A3	1/23/97	11.0	11.0	2 to 11	1 to 11	0.5 to 1	0 to 0.5	NA
OLD-17-10C	2/5/97	47.5	47.0	42 to 47	40 to 47.5	38 to 40	0 to 40	NA
Supplemental	Screening (Ph	nase II):						
OLD-17-11B	4/28/98	20.5	20.0	15 to 20	13 to 20.5	10 to 13	0 to 10	NA
OLD-17-12C	4/28/98	50.5	50.0	45 to 50	43 to 50.5	40 to 43	0 to 40	NA
OLD-17-13B	4/28/98	20.5	20.0	15 to 20	13 to 20.5	10 to 13	0 to 10	NA
OLD-17-14C	4/29/99	48.5	48.0	43 to 48	41 to 48.5	38 to 41	0 to 38	NA
OLD-17-15A	4/29/98	12.5	12.0	2 to 12	1 to 12.5	0.5 to 1	0 to 0.5	NA
OLD-17-16B	4/29/98	20.5	20.0	15 to 20	13 to 20.5	10 to 13	<b>0</b> to 10	NA
OLD-17-17C	4/30/98	48.5	48.0	43 to 48	41 to 48.5	38 to 48.5	0 to 38	NA
OLD-17-18A	4/30/98	12.5	12.0	2 to 12	1 to 12.5	0.5 to 1	0 to 0.5	NA
OLD-17-19B	5/1/98	30.5	30	25 to 30	23 to 30.5	20 to 23	0 to 20	NA
OLD-17-20C	5/4/98	52.5	52.0	47 to 52	45 to 52.5	42 to 45	0 to 42	NА
OLD-17-21B	5/5/98	20.5	20.0	15 to 20	13 to 20.5	10 to 13	0 to 10	NA
OLD-17-22C	5/5/98	48.5	48.0	43 to 48	41 to 48.5	38 to 41	0 to 38	NA
OLD-17-23A	5/5/98	12.5	12.0	2 to 12	1 to 12.5	0.5 to 1	0 to 0.5	NA
OLD-17-24B	5/5/98	25.5	25.0	20 to 25	18 to 25.5	15 to 18	0 to 15	NA
OLD-17-25C	5/7/98	63.5	63.0	58 to 63	56 to 63.5	53 to 56	0 to 53	0 to 50
See notes at er	nd of table.			·				

#### Table I-1 (Continued) Monitoring Well Construction Details

Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

1			One	,,,ao, , ,o,,aa				
Well ID ¹	Date Installed	Borehole Depth (feet bis)	Well Depth (feet bis)	Screen Interval (feet bis)	Filter Pack Interval (feet bls)	Seal Interval (feet bis)	Grout Interval (feet bis)	Casing Depth (feet bis)
Supplemental	Screening (Pi	nase (I) (contin	ued):					
OLD-17-26A	5/5/98	12.5	12.0	2 to 12	1 to 12.5	0.5 to 1	0 to 0.5	NA
OLD-17-27B	5/5/98	20.5	20.0	15 to 20	13 to 20.5	10 to 13	0 to 10	NA
OLD-17-28C	5/7/98	63.5	63	58 to 63	56 to 63.5	53 to 56	0 to 53	0 to 50

¹ A, B, and C suffixes denote shallow, intermediate, and deep wells, respectively.

Notes: All permanent monitoring wells (excluding microwells) constructed with 2-inch-diameter polyvinyl chloride (PVC) riser and screen (0.010-inch slot), and installed in a 6.5-inch-diameter borehole. Temporary monitoring well constructed with 2-inch-diameter PVC riser and screen (0.010-inch slot), and installed in a 3-inch-diameter borehole. Microwells constructed with 1-inch-diameter PVC riser and screen (0.010-inch slot), and installed in 2-inch-diameter borehole.

ID = identification.

bls = below land surface.

NA = not applicable (no water level collected).

² Denotes a temporary monitoring well, installed with stainless steel hand auger.

³ Denotes a microwell, installed by direct-push methods.

#### Table I-2 Water-Level Elevation Survey

Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

Location Measuring Point Elevation (feet msl)		Well Depth	Elevation of Screened Interval	• •		Water Elevation (feet msl)	
	(feet msl)	(feet bls)	(feet msl)	7/14/98	8/12/98	7/14/98	8/12/98
OLD-17-01A	90.3	12.5	78.3 to 88.3	NA	NA	NA	NA
OLD-17-02A	90.1	12.5	78.1 to 88.1	3.9	2.6	86.2	87.6
OLD-17-03A	89.5	12.5	77.5 to 87.5	3.8	2.9	85.7	86.6
OLD-17-04A	89.1	12.5	77.1 to 87.1	3.2	2.3	85.9	86.8
OLD-17-05A	89.0	12.5	77.0 to 87.0	2.9	2.0	86.1	87.0
OLD-17-06A ²	89.8	11.0	78.8 to 87.8	NA	NA	NA	NA
OLD-17-07A ²	89.4	11.0	78.4 to 87.4	NA	NA	NA	NA
OLD-17-08A ²	89.7	11.0	78.7 to 87.7	NA	NA	NA	NA
OLD-17-09A ²	89.0	11.0	78.0 to 87.0	NA	NA	NA	NA
OLD-17-10C	89.2	47.0	42.2 to 47.2	3.9	2.3	85.3	86.9
OLD-17-11B	89.8	20.0	69.8 to 74.8	3.6	2.4	86.2	87.4
OLD-17-12C	89.7	50.0	39.7 to 44.7	4.4	2.7	85.3	86.9
OLD-17-13B	90.0	20.0	70.0 to 75.0	4.0	3.2	86.0	86.8
OLD-17-14C	89.9	48.0	41.9 to 46.9	5.3	3.2	84.6	86.6
OLD-17-15A	88.9	12.0	76.9 to 86.9	2.8	2.2	86.1	86.7
OLD-17-16B	88.7	20.0	68.7 to 73.7	2.9	2.2	85.8	86.5
OLD-17-17C	88.6	48.0	40.6 to 45.6	4.2	2.2	84.4	86.4
OLD-17-18A	91.1	12.0	79.1 to 89.1	4.3	3.1	86.8	88.0
OLD-17-19B	91.5	30.0	61.5 to 66.5	6.4	4.3	85.1	87.1
OLD-17-20C	91.5	52.0	39.5 to 44.5	7.0	4.9	84.5	86.6
OLD-17-21B	90.5	20.0	70.5 to 75.5	4,1 ,	2.8	86.4	87.7
OLD-17-22C	90.5	48.0	42.5 to 47.5	5.4	3.4	85.1	87.1
OLD-17-23A	90.3	12.0	78.3 to 88.3	3.6	2.7	86.7	87.6
OLD-17-24B	90.4	25.0	65.4 to 69.4	4.2	2.9	86.2	87.5
OLD-17-25C	90.3	63.0	27.3 to 32.3	33.4	34.4	56.9	55.9
OLD-17-26A	90.0	12.0	78.0 to 88.0	3.1	3.4	86.9	87.6
OLD-17-27B	90.0	20.0	70.0 to 75.0	3.4	2.6	86.6	87.4
OLD-17-28C	90.0	63.0	27.0 to 32.0	32.1	30.1	57.9	59.8
OLD-17-29A3	89.4	6.0	83.4 to 84.4	3.3	2.7	86.1	86.7
OLD-17-30A3	89.4	6.0	83.4 to 84.4	3.4	2.8	86.0	86.6
OLD-17-31A3	89.6	6.0	83.6 to 84.5	3.7	3.2	85.9	86.4
See notes at en	nd of table.	·····					······································

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#### Table I-2 (Continued) Water-Level Elevation Survey

Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

Location	Measuring Well Point Depth		Elevation of Screened		Depth to Water (feet btoc)		ater vation t msl)
	Elevation¹ (feet msl)	(feet bis)	interval (feet msi)	7/14/98	8/12/98	7/14/98	8/12/98
OLD-17-32A3	89.7	6.0	83.7 to 84.7	3.7	3.3	86.0	86.4
OLD-17-33A3	89.5	6.0	83.5 to 84.5	3.6	3.1	85.9	86.4
17PZ01A⁴	90.1	14.0	76.1 to 86.1	4.8	3.5	85.8	86.6
17PZ02C⁴	90.0	46.0	44.0 to 49.0	5.4	3.7	84.6	86.1
17PZ03A⁴	89.5	14.0	75.5 to 85.5	4.0	3.4	85.5	86.1
17PZ04C⁴	89.5	46.0	43.5 to 48.5	4.9	3.2	84.6	86.3
17PZ05A⁴	89.4	14.0	75.4 to 85.4	3.9	3.3	85.5	86.1
17PZ06C ⁴	89.1	46.0	43.1 to 48.1	4.4	2.7	84.7	86.4
17SG01 ⁵	87.5	NA	NA	2.4	2.2	85.1	85.3

¹ Measuring points refers to top-of casing at monitoring wells and drive points, and to top of gauge at staff gauge.

Notes: msl = above mean sea level (U.S. Geological Survey, North American Datum, 1927).

bmp = below measuring point.

btoc = below top of casing.

NA = not applicable (no water level collected).

² Microwell.

³ Drive point installed into base of drainage ditch located along south side of study area.

⁴ Piezometer.

⁵ Staff gauge installed in drainage ditch located along south side of study area.

#### Table I-3 Hydraulic Potential Survey Results

Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

Location	Water-Level Elevation (feet msl)		Elevation of	Head Potential Measurements (feet)				
			Mid-Point of Well Screen	I huky 1/1 1		August 12, 1998		
	July 14, 1998	August 12, 1998	(feet msl)	Vertical Gradient ¹ (ft/ft)	Direction of Hydraulic Potential	Vertical Gradient ¹ (ft/ft)	Direction of Hydraulic Potential	
Monitoring Wells ²								
OLD-17-02A	86.2	87.6	NA	NA				
OLD-17-21B	86.4	87.7	73.0	0.02	Upward	0.01	Upward	
OLD-17-22C	85.1	87.1	45.0	0.05	Downward	0.02	Downward	
OLD-17-03A	85.7	86.6	NA	NA				
OLD-17-13B	86.0	86.8	72.5	0.02	Upward	0.01	Upward	
OLD-17-14C	84.6	86.6	44.4	0.05	Downward	0.01	Downward	
OLD-17-04A	85.9	86.8	82.1	NA				
OLD-17-10C	85.3	86 9	44.7	0.02	Downward	0.003	Upward	
OLD-17-05A	86.1	87.0	NA	NA				
OLD-17-11B	86.2	87.4	72.3	0.01	Upward	0.03	Upward	
OLD-17-12C	85.3	86.9	42.3	0.03	Downward	0.02	Downward	
OLD-17-15A	86.10	86.7	NA	NA				
OLD-17-16B	85.8	86.5	71.2	0.02	Downward	0.01	Downward	
OLD-17-17C	84.4	86.4	43.1	0.03	Downward	0.004	Downward	
OLD-17-18A	86.8	88.0	NA	NA				
OLD-17-19B	85.1	87.1	63.0	0.03	Downward	0.04	Downward	
OLD-17-20C	84.5	86.6	42.0	0.03	Downward	0.02	Downward	
OLD-17-23A	86.7	87.6	NA	NA				
OID-17-24B	86.2	87.5	67.9	0.03	Downward	0.01	Downward	
OLD-17-25C3	56.9	55.9	29.8	0.77	Downward	0.83	Downward	
OLD-17-26A	86.9	87.6	NA	NA			•	
OLD-17-27B	86.6	87.4	72.5	0.02	Downward	0.01	Downward	
OLD-17-28C3	57.9	59.8	29.5	0.67	Downward	0.64	Downward	
See notes at end of ta	ible.							

#### Table I-3 (Continued) Hydraulic Potential Survey Results

Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

	Water-Level Elevation (feet msl)		Elevation of	Head Potential Measurements (feet)				
Location		August 12, 1998	MidPoint of Well Screen (ft-msl)	July 14, 1998		August 12, 1998		
	July 14, 1998			Vertical Gradient ¹ (ft/ft)	Direction of Hydraulic Potential	Vertical Gradient ¹ (ft/ft)	Direction of Hydraulic Potential	
Piezometers ⁴		<u> </u>					±	
OLD-17-PZ1A	85.3	86.6	NA	NA			er F	
OLD-17-PZ2C	84.6	86.1	46.5	0.02	Downward	0.01	Downward	
OLD-17-PZ3A	85.5	86.1	NA	NA				
OLD-17-PZ4C	84.6	86.3	46.0	0.02	Downward	0.01	Downward	
OLD-17-PZ5A	85.5	86.1	NA	NA				
OLD-17-PZ6C	84.7	86.4	45.6	0.02	Downward	0.01	Upward	
Staff Gauge and Dri	ive Points							
OLD-17-SG1 ⁵ (Staff Gauge)	85.1	85.3	NA					
OLD-17-29A ⁶	86.1	86.7	83.9	0.83	Upward	1.0	Upward	
OLD-17-30A ⁶	86.0	86.6	83.9	0.75	Upward	0.93	Upward	
OLD-17-31A ⁶	85.9	86.4	84.1	0.80	Upward	0.85	Upward	
OLD-17-32A ⁶	86.0	86.4	84.2	1.0	Upward	0.82	Upward	
OLD-17-33A8	85.9	86.4	84.0	0.73	Upward	0.69	Upward	

¹ Calculated by dividing the difference between the elevation of the water level in each monitoring well by the elevation of the mid-point of the respective well screens.

Notes: msl = mean sea level.

ft/ft = feet per foot.

NA = not available.

² Monitoring wells situated in clusters: wells with "A" designation are screened at water table surface; wells with "B" designation are screened at intermediate depths of aquifer; and wells with "C" designation are screened at the bottom of the aquifer.

³ Monitoring well screen situated below shallowest clay seam within the Hawthorn Group.

⁴ Piezometer installed on south side of canal to measure groundwater elevation.

⁵ Staff gauge installed in drain canal to measure elevation canal surface water level.

⁶ Drive point installed into base of drainage canal to measure elevation of groundwater beneath canal.

#### Table I-4 Hydraulic Conductivity Testing Results

Base Realignment and Closure Environmental Site Screening Report Study Area 17 Naval Training Center Orlando, Florida

	<del></del>	Oriand	o, Florida			
Monitoring Well	Geologic	Hydr	aulic Conduc	tivity ¹	Groundwater Flow Rate ²	
Identifier	Unit	ft/min	ft/min ft/day		(ft/yr)	
Shallow Wells:						
OLD-17-02A	fine sand	1 × 10 ⁻³	1.4	5×10⁴		
OLD-17-05A	fine sand	2×10 ⁻³	2.8	1 × 10 ⁻³		
OLD-17-15A	silty sand	4×10 ⁻⁴	0.6	2×10 ⁻⁴		
OLD-17-18A	silty sand	2×10 ⁻⁴	0.3	1×10-4	•	
Geometric Mean:		1.1 × 10 ⁻³	1.5	6×10⁴	7.3	
Intermediate Wells:						
OLD-17-11B	silty sand	2×10 ⁻⁴	0.3	1 × 10 ⁻⁴		
OLD-17-16B	silty sand	4 × 10 ⁻⁴	0.6	2×10 ⁻⁴		
OLD-17-19B	silty sand	3×10 ⁻⁴	0.4	2×10⁴		
OLD-13-21B	silty sand	3×10 ⁻⁴	0.4	2×10 ⁻⁴		
Geometric Mean:		3×10 ⁻⁴	0.5	2×10⁴	1.8	
Deep Wells:						
OLD-17-12C	silty sand	6 × 10 ⁻⁴	0.9	3×10 ⁻⁴		
OLD-17-17C	silty sand	2 × 10 ⁻³	2.9	1 × 10 ⁻³		
OLD-17-20C	silty sand	3 × 10 ⁻³	4.3	2×10 ⁻³		
OLD-17-22C	silty sand	4 × 10 ⁻⁴	0.6	2×10 ⁻⁴		
Geometric Mean:		1 × 10 ⁻³	2.5	2×10 ⁻³	6.1	

Both rising head (slug-in) and falling head (slug-out) test were performed at each intermediate and deep monitoring well. Hydraulic conductivity shown above was calculated by averaging the two test values. Only falling head tests were performed at the shallow wells.

Notes: ft/min = feet per minute.

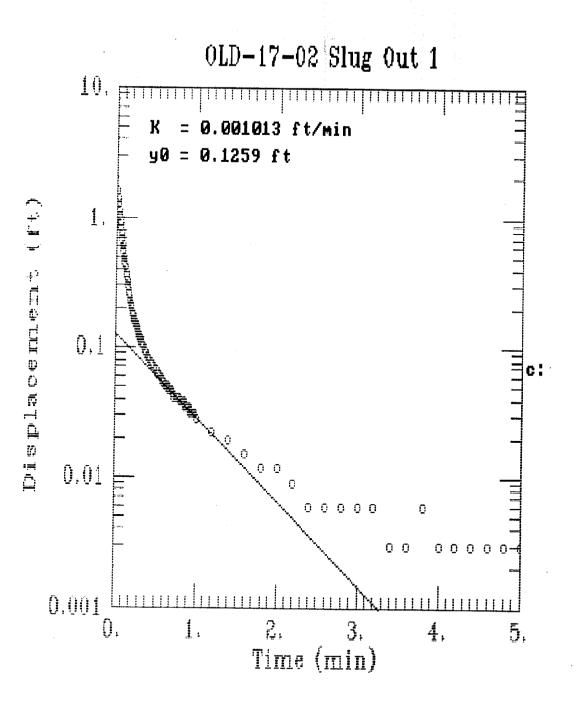
ft/day = feet per day.

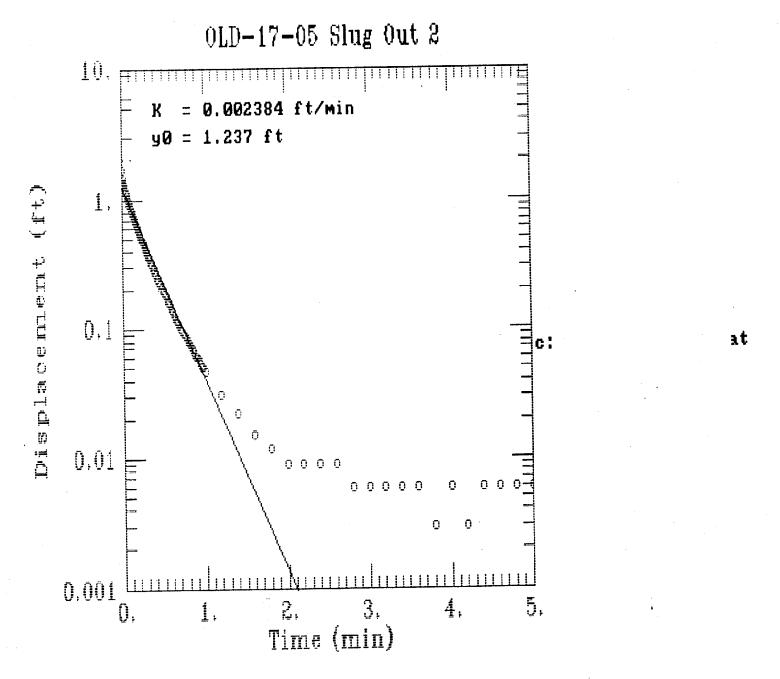
cm/sec = centimeters per second.

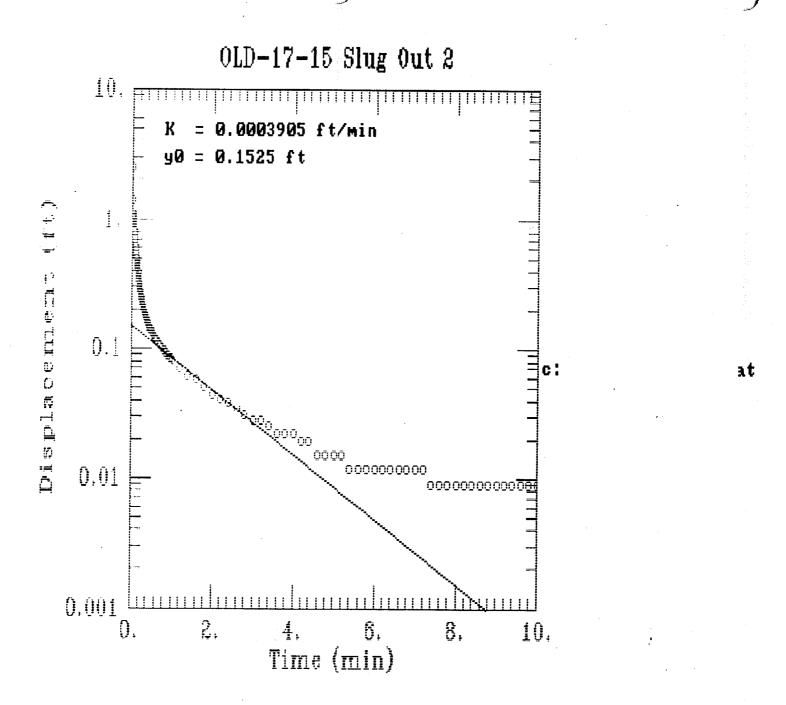
ft/yr = feet per year. ft/ft = feet per foot.

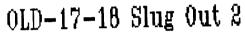
² Groundwater flow rate calculated using the following formula: V=Ki/p, where K = the hydraulic conductivity; i = the average gradient; p = an assumed porosity value of .30 (unitless). The hydraulic gradient for the shallow, intermediate, and deep intervals of the surficial aquifer measured at 0.004 ft/ft, 0.003 ft/ft, and 0.002 ft/ft, respectively

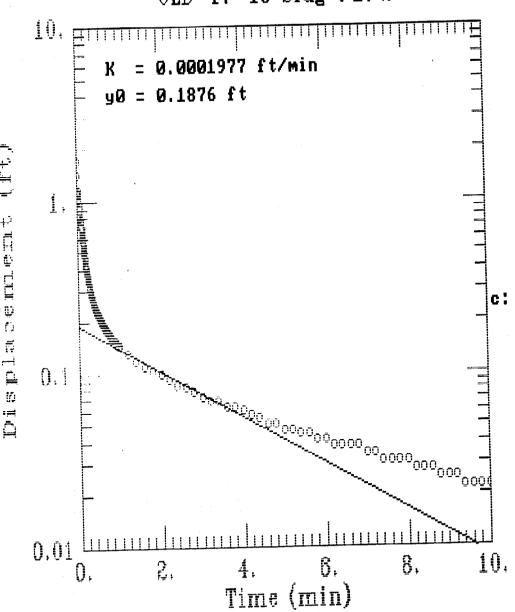
#### APPENDIX J SLUG-TESTING SEMILOG PLOTS

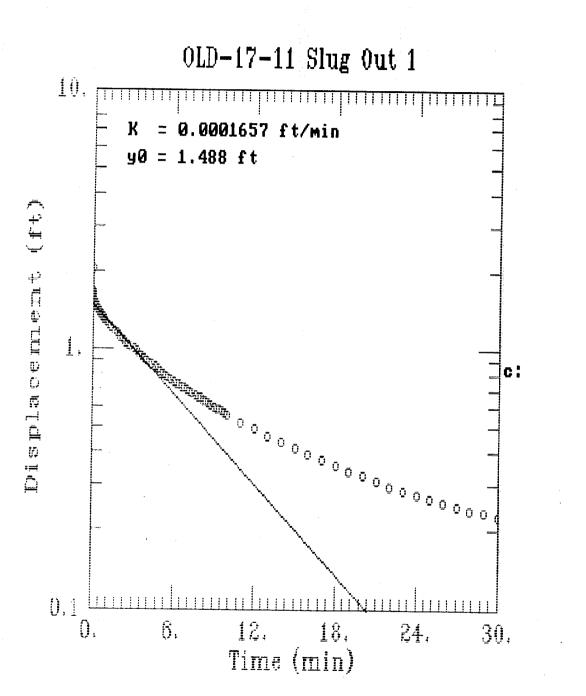


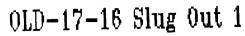


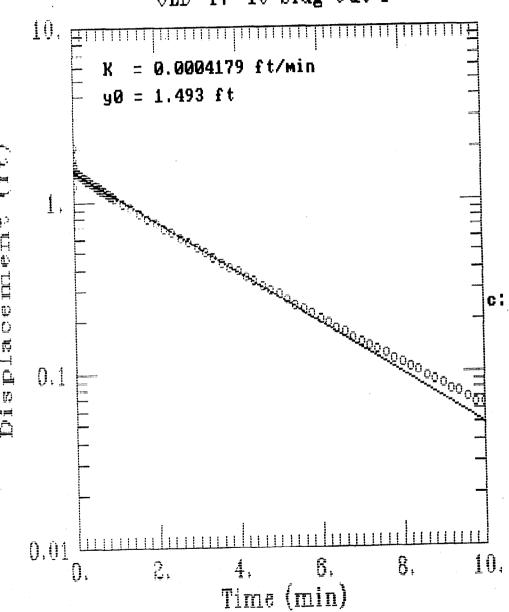




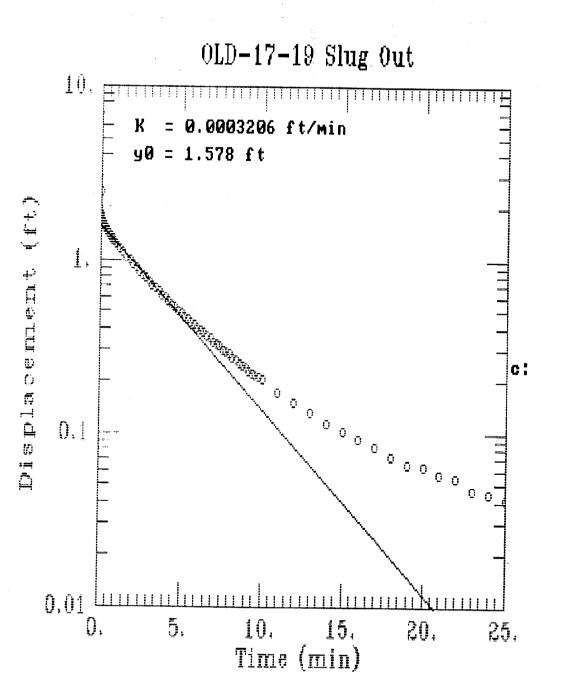


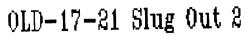


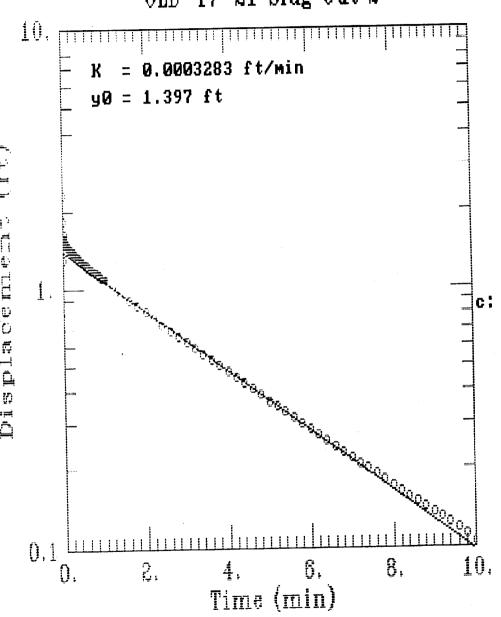




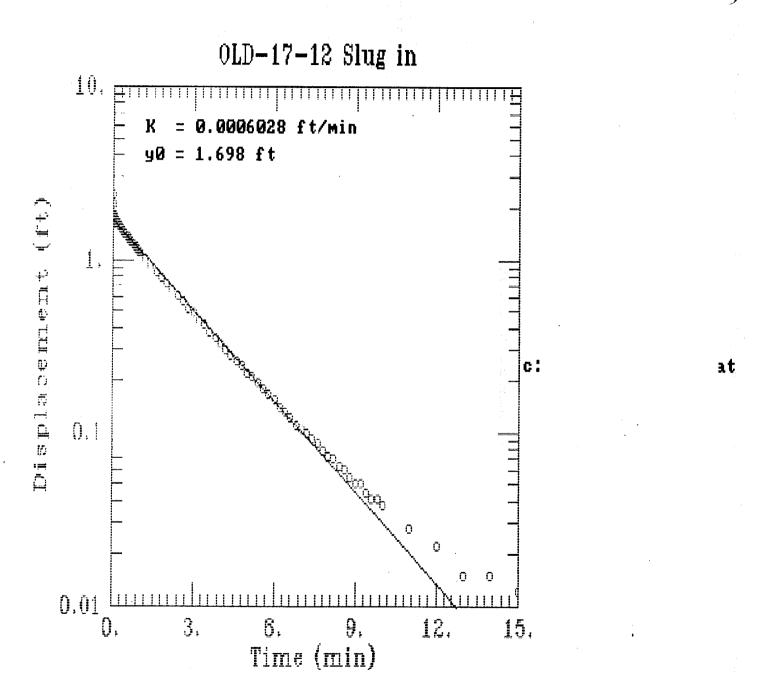
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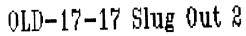


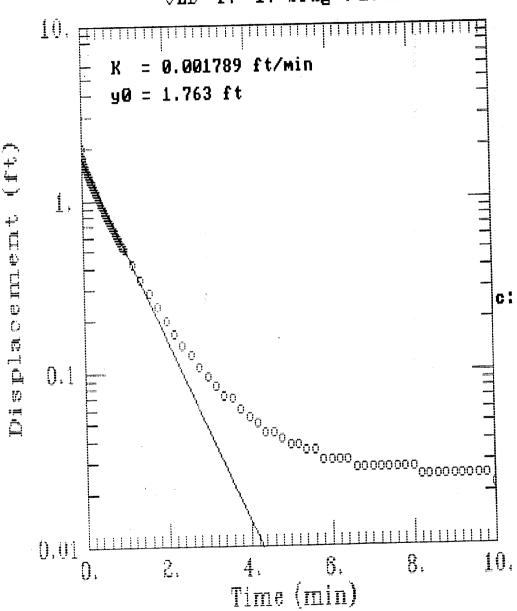




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